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CANADA-SASKATCHEWAN
SOUTH SASKATCHEWAN RIVER BASIN STUDY

TECHNICAL APPENDIX II

RESOURCE ASSESSMENT

E. WATER MANAGEMENT

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1.0 INTRODUCTION

1.1 THE SOUTH SASKATCHEWAN RIVER BASIN STUDY

The results of the Canada-Saskatchewan South Saskatchewan River Basin Study (SSRBS) are documented in a series of reports. The final report provides a summary of the findings in a form suitable for use by the general public. The final report is supported by seven technical appendices: Issues Documentation, Water Quantity, Water Quality, Water Use, Environment, Water Management and The Framework Plan. The technical appendices provide sufficient detail for use by water management professionals. The technical appendices are based on detailed studies reported in more than 60 technical reports prepared for the basin study and various reports on the study area prepared for other purposes. A complete list of the technical reports is included in Appendix A of this report.

This technical appendix, "Water Management", provides a brief overview of the history of water management and describes the existing legal and administrative framework for water management in the study area.

1.2 STUDY BACKGROUND

The South Saskatchewan River is the most reliable supply of good quality water in the southern half of Saskatchewan. It contributes significantly to the social and economic well-being of the people of the region. During the early 1980s, several events led to increasing concern about the ability of the river to meet future needs.

The water resources of the South Saskatchewan River are intensively used by Alberta. Alberta irrigates more than a half million hectares of land in its portion of the basin. During the mid-1980s, Alberta completed a planning study which identified a range of future development options. Several of the options provided for significant expansion of irrigation which would further reduce the amount of water passed to Saskatchewan.

Since its joint development by the federal and provincial governments more than 20 years ago, Lake Diefenbaker has become a focus for development in the Saskatchewan portion of the basin. This multi-purpose reservoir supports irrigation, hydro-electric energy generation, recreation, industrial and municipal water supply. In Saskatchewan, plans were also laid during the 1980s for further development based on the water resources of the South Saskatchewan River, particularly Lake Diefenbaker.

These plans included significant irrigation development. At the same time, proposals were made to further develop the recreation potential of the reservoir. Such developments would place additional demands on the water resources of the South Saskatchewan River.

While further development was being considered for the South Saskatchewan River Basin in both Alberta and Saskatchewan, there were several drought years in the 1980s. The droughts led to increased demand for water while the supply was reduced. In Saskatchewan, this caused problems for most water uses. There was concern regarding the ability of Lake Diefenbaker to support continued development. Weed growth at the upstream end of Lake Diefenbaker also led to concerns that the high quality water in Lake Diefenbaker was at risk.

The possibility of increased development, coupled with a reduced supply, led to greater concern about diverting water from the basin. Prior to the study, there had been a number of options identified for increased diversion of water from the South Saskatchewan River. However, when such diversions were identified, existing users expressed concern about the possible impacts. There was a clear need to determine the importance of the water in the basin to existing and future users.

The Canada-Saskatchewan South Saskatchewan River Basin Study was undertaken to provide information to guide water management. It will help ensure that the water resources of the basin can meet the needs of existing and future users.

1.2.1 The Study Agreement

On May 16, 1986, Federal Environment Minister Tom McMillan and Minister Responsible for SaskWater, Eric Berntson, signed the Canada-Saskatchewan South Saskatchewan River Basin Study Agreement. The agreement set aside 1.6 million dollars for the study with expenses shared equally by SaskWater and Environment Canada. The agreement established policies and procedures for a study of the Saskatchewan portion of the South Saskatchewan River Basin.

The Agreement identified three objectives for the study:

(a) "document the current and emerging water and related issues in the South Saskatchewan River Basin in Saskatchewan;

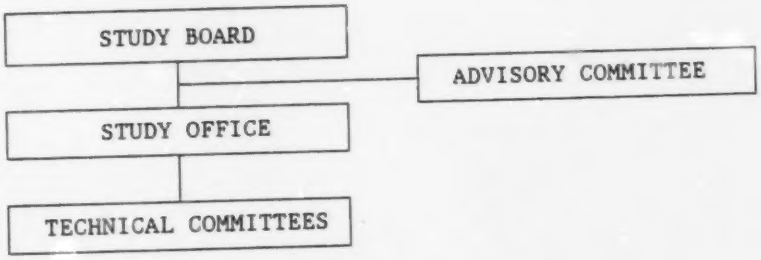
(b) "carry out an assessment of the water and related resources of the South Saskatchewan River Basin, and their current and future use;

(c) "develop a framework plan for the conservation and management of the water in the South Saskatchewan River Basin in Saskatchewan which allows for the evaluation of water resource projects."

1.2.2 Study Organization

The South Saskatchewan River Basin Study Board was responsible for the completion of the study. The board had one representative from each of the two sponsoring agencies: Environment Canada and SaskWater.

STUDY ORGANIZATION



An advisory committee provided policy information to the study board. Senior officials, representing agencies with water management responsibilities or interests in the basin, made up the advisory committee.

The study board set up the South Saskatchewan River Basin Study Office and staffed it with a director, assistant director and secretary. The director was responsible to the study board for the day-to-day administration of the study.

Technical committees assisted the study office. Representatives for the committees were drawn from agencies with responsibilities for water management. The agencies included federal and provincial departments, crown corporations and municipalities.

The technical committees provided the study office with expert advice on water quantity, water quality, water use and public involvement. A management strategies technical committee was responsible for drawing together the information produced by the other technical committees and identifying management options.

The technical committees also helped develop terms of reference for work carried out by consultants. More than 20 different consultants participated in the study. The consultants played a role in compiling the basic information needed to carry out the study.

PARTICIPATING AGENCIES

Environment Canada
SaskWater

Agriculture Canada
    Agri-Food Development Branch
    Prairie Farm Rehabilitation Administration
Western Economic Diversification

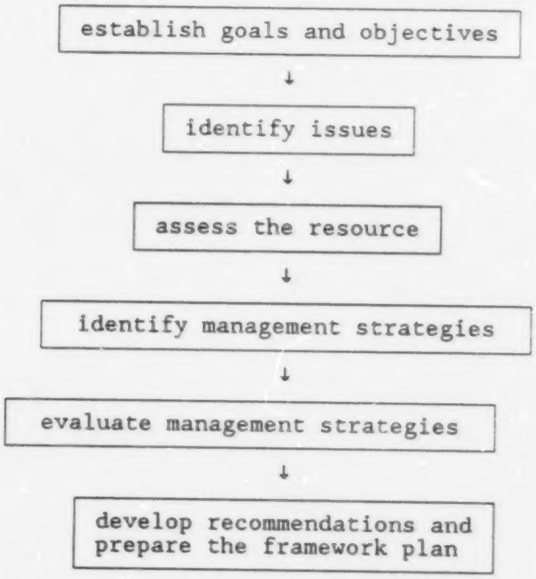
Saskatchewan Environment and Public Safety
Saskatchewan Parks and Renewable Resources
Saskatchewan Culture, Multiculturalism and Recreation
Saskatchewan Rural Development
Saskatchewan Agriculture and Food

SaskPower
City of Saskatoon
Meewasin Valley Authority

1.2.3 Planning Process

Early in the study, the study board defined the planning process and eight planning principles. These principles guided the study.

THE PLANNING PROCESS


establish goals and objectives
identify issues
assess the resource
identify management strategies
evaluate management strategies
develop recommendations and prepare the framework plan

PLANNING PRINCIPLES

THE WISE AND EFFICIENT MANAGEMENT AND USE OF WATER SHOULD BE PROMOTED THROUGH ALL POSSIBLE MEANS.

THE ECOLOGICAL INTEGRITY OF WATER RESOURCE SYSTEMS SHOULD BE MAINTAINED.

PUBLIC INVOLVEMENT IS ESSENTIAL FOR THE STUDY TO ACHIEVE ITS OBJECTIVES.

ALL WATER USES THAT HAVE SOCIAL, ECONOMIC OR ENVIRONMENTAL VALUE SHOULD BE CONSIDERED.

DOMESTIC WATER USE SHOULD BE THE HIGHEST PRIORITY AMONG ALL USES.

THE WATER RESOURCES OF THE BASIN SHOULD BE MANAGED FOR THE BENEFIT OF ALL PEOPLE IN THE PROVINCE.

WATER RESOURCES SHOULD BE DEVELOPED AND MANAGED CONSISTENT WITH THE CONCEPT OF SUSTAINABLE DEVELOPMENT.

INTERPROVINCIAL SHARING OF WATER IS BASED ON THE MASTER AGREEMENT ON APPORTIONMENT.

The planning process included the use of a base year as the reference point for the analysis of future conditions. The base year for the South Saskatchewan River Basin Study was 1986 – the year the study began.

There were three separate planning exercises undertaken. They related to three different time horizons. The short-term planning exercise focused on the year 2000 and dealt with water management issues in the basin. The long-term planning exercise looked at the year 2020 and established a range of development options. The third and final planning exercise was the system-limit. It helped put the long-term planning exercise in perspective by identifying the development limits of the basin.

There are three main components to the Study area: Mainstem South Saskatchewan River, Saskatoon Southeast Water Supply (SSEWS) system and Swift Current Creek. Although water management in these components is interrelated, the interrelationships are minor. Therefore most aspects or the study considered each component separately. The Mainstem includes the South Saskatchewan River from the Alberta border to the confluence with the North Saskatchewan at the downstream end of the Study area. Lake Diefenbaker is included in the Mainstem component. The effects of actions on this mainstem area on the Saskatchewan River downstream of the study are were also considered in the mainstem section of the report. For this study, the SSEWS system was considered to include all of the works downstream of the East Side Pump Station near Gardiner Dam on Lake Diefenbaker. The Swift Current Creek Basin includes the Rushlake Creek basin.

1.3 SYSTEM DESCRIPTION

The following is a brief introduction to the water resources of the study area. More details are provided in the body of this report and in the other reports of this series.

1.3.1 Mainstem

The South Saskatchewan River rises in southern Alberta where it receives runoff from about 120 000 km^2 of drainage area. A portion of this drainage basin is located on the eastern slopes of the Rocky Mountains and foothills. This portion is a highly productive runoff area, producing virtually all of the flow received at the Alberta - Saskatchewan border where the average annual natural flow is 9 200 000 dam^3. This natural flow has ranged from lows of about 4 800 000 dam^3 in dry years to 16 000 000 dam^3 in wet years. On average, about two-thirds of the runoff occurs in the May to August period and less than ten percent occurs in the December to March period.

In Alberta the water is used for irrigation, municipal, industrial, hydroelectric, fish, wildlife and recreation uses. On average, the flow is reduced by about 1 900 000 dam^3 per year, with irrigation taking about 95 percent of the water.

In Saskatchewan the river flows through a region of very low runoff. On average, the local runoff augments the natural flow by about two percent with half of this local flow originating in Swift Current Creek. Figure 1 shows the drainage area in Saskatchewan.

The largest water uses in Saskatchewan are centred around Lake Diefenbaker and the city of Saskatoon. Total water consumption averages about 500 000 dam^3 per year. Evaporation from Lake Diefenbaker accounts for about half of this total, irrigation is the second largest user. Municipal and industrial users take a relatively small portion of the flow. Although less than 10 percent of the water is consumed, the remaining water is used for important instream purposes, including hydroelectric generation, recreation and fish and wildlife.

Downstream of the study area the South Saskatchewan River joins the North Saskatchewan River and their combined flow continues east in the Saskatchewan River. Within Saskatchewan the flow is used to generate electric energy at the Nipawin and E. B. Campbell Power Stations. Downstream of the Saskatchewan - Manitoba border, the Grand Rapids Power Station uses the river before the water discharges to Lake Winnipeg. At Lake Winnipeg the water joins other flows from the south and east as it flows down the Nelson River to Hudson Bay. Along the Nelson River, there are additional power stations. In addition to the power stations the rivers downstream of the study area serve as local transportation routes, provide habitat for fish and wildlife and serve the water supply needs of several communities.

The quality of the water in the mainstem is very good, meeting the requirements of all of the existing and projected users. Upstream of Lake Diefenbaker the quality varies from season to season with the rate of flow but in the lake the seasonal variations are mixed, producing a very uniform quality downstream. Within the study area the greatest pollution threat arises from municipal and industrial effluents in the Saskatoon area where effluent treatment requirements are regularly under review.

1.3.2 SSEWS System

The SSEWS is a manmade water delivery system which draws water from Lake Diefenbaker and delivers it to an area northeast of the lake, as far as Lanigan, as shown on Figure 2. The major uses of the water are irrigation, industries, municipalities, recreation and wildlife. The largest irrigation project is the South Saskatchewan River Irrigation District which serves over 16 000 ha. Potash mines are the main industrial users.

The quality of the water at the upstream end of this system is equal to the mainstem, since it is drawn from Lake Diefenbaker. As the water moves downstream in the system, local surface and ground water inflows of less desirable quality are added and evaporation concentrates impurities resulting in a lower quality of water. The quality is satisfactory for the uses made of it, but is less than ideal.

1.3.3 Swift Current Creek

Swift Current Creek is the largest tributary to the mainstem in Saskatchewan. This creek drains a portion of the Cypress Hills as shown on Figure 3. The average natural flow is about 80 000 dam^3 and the annual flow ranges from about 20 000 dam^3 to 265 000 dam^3.

Swift Current Creek water is used for irrigation and as a source of supply for municipal water at the city of Swift Current and the Village of Herbert. The irrigation and municipal systems rely on Duncairn Reservoir for flow regulation to overcome natural periods of low flow. The water supply system from Swift Current Creek extends to areas of the neighbouring Rushlake Creek Basin. In addition to the consumptive water uses, the water of this creek is used for recreation, fish and wildlife. Although the quality of the water in this area is not as good as that in the mainstem, it has been satisfactory for the current uses.

FIGURE 1 THE STUDY AREA

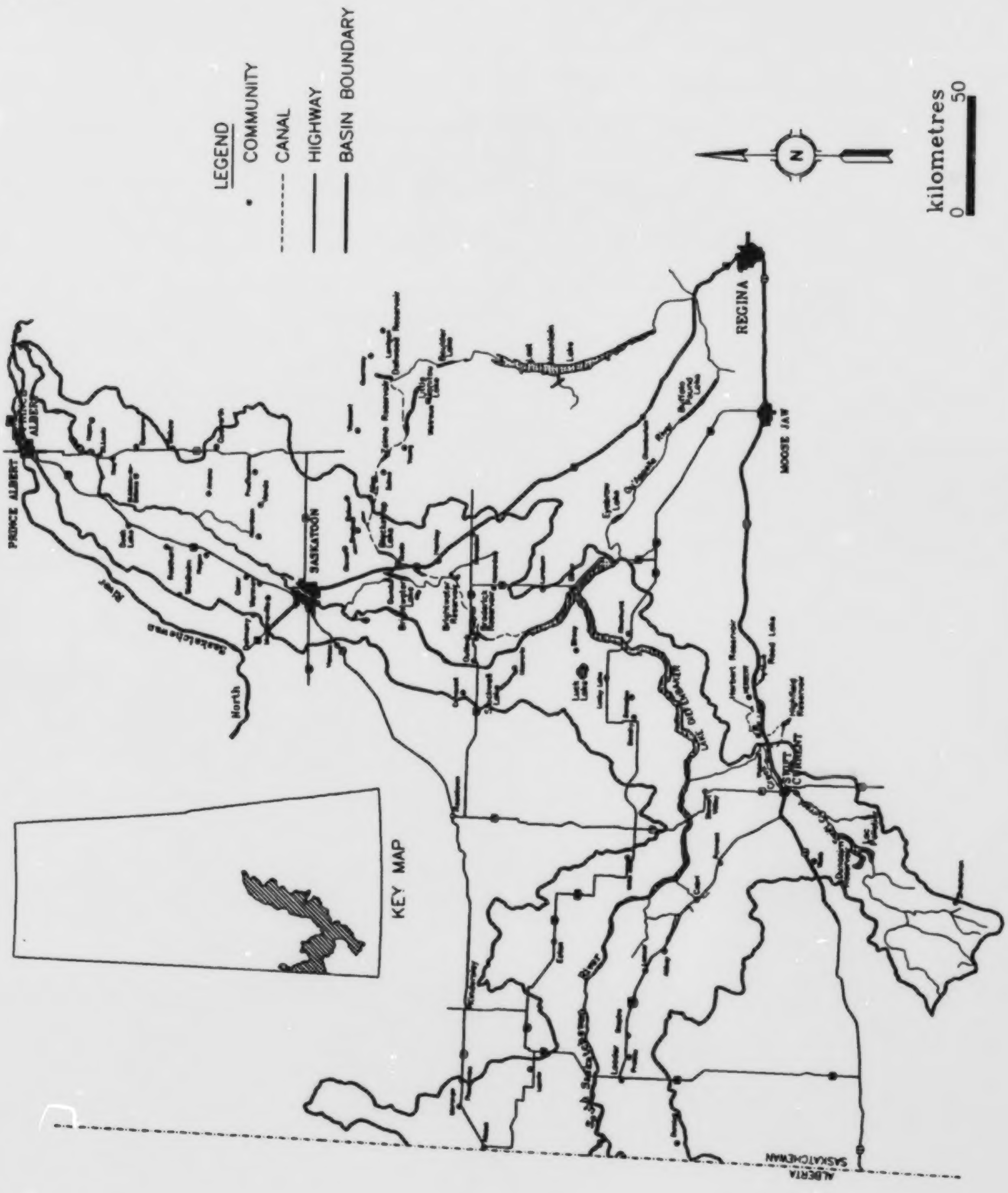

LEGEND
COMMUNITY
CANAL
HIGHWAY
BASIN BOUNDARY
N
kilometres
0
50
KEY MAP
PRINCE ALBERT
SASKATOON
North Saskatchewan River
REGINA
MOOSE JAW
SWIFT CURRENT
LAKE DIEFENBAKER
South Saskatchewan River
ALBERTA
SASKATCHEWAN

FIGURE 2 SASKATOON SOUTHEAST WATER SUPPLY SYSTEM

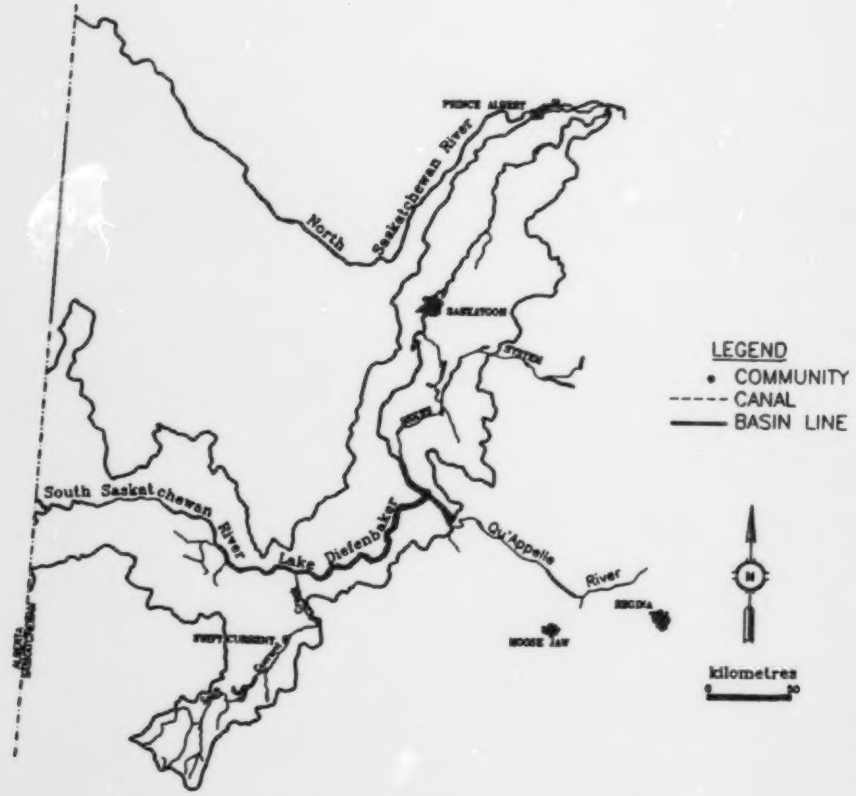
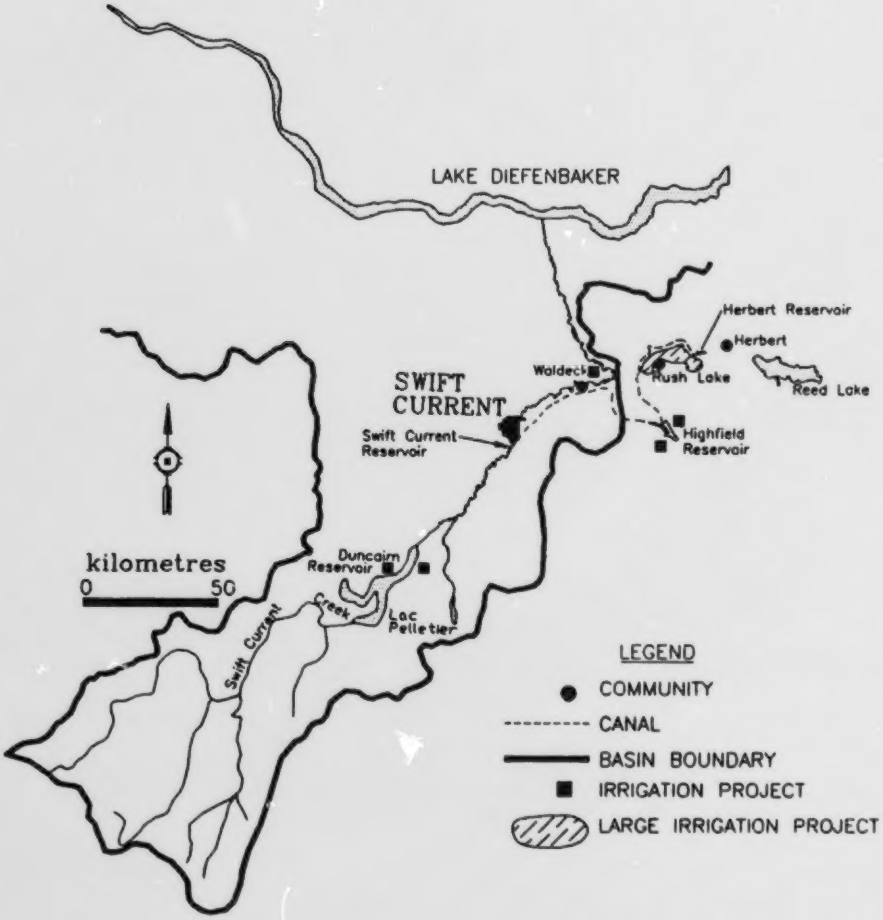

PRINCE ALBERT
North Saskatchewan River
SASKATOON
SYSTEM
South Saskatchewan River
Lake Diefenbaker
Qu'Appelle River
REGINA
MOOSE JAW
SWIFT CURRENT
ALBERTA
SASKATCHEWAN
LEGEND
• COMMUNITY
----- CANAL
——— BASIN LINE
N
kilometres
0
30

FIGURE 3 SWIFT CURRENT CREEK BASIN


LAKE DIEFENBAKER
Herbert Reservoir
Herbert
Waldeck
Rush Lake
Reed Lake
SWIFT CURRENT
Swift Current Reservoir
Highfield Reservoir
kilometres
0
50
Duncairn Reservoir
Swift Current Creek
Lac Pelletier
LEGEND
COMMUNITY
CANAL
BASIN BOUNDARY
IRRIGATION PROJECT
LARGE IRRIGATION PROJECT

2.0 HISTORICAL OVERVIEW OF WATER MANAGEMENT

2.1 PRIOR TO AGRICULTURAL SETTLEMENT

The earliest settlers of the prairie region were nomadic or semi-nomadic people who used the waterways for their domestic needs and for transportation. The river valley provided shelter from the harsh prairie climate. Water management was limited to taking advantage of the resource where it was available.

By the late seventeenth and early eighteenth century explorers including Henry Kelsey (1691), Louis-Joseph LaVerendrye (1749) and Antony Henday (1754) had reached the South Saskatchewan River Basin. The river became an important transportation route for the fur trade. In 1670, England granted a charter to the Hudson Bay Company giving it control over Ruperts Land which included all territories drained by rivers flowing to Hudson Bay. Although France and England disputed jurisdiction over the region and other traders competed for the region's furs, the prairies remained a relatively open wilderness for over 200 years as settlement for agriculture was deterred by the Hudson Bay Company Charter.

During this period, the South Saskatchewan River was a part of the regional system of trade routes. The river was an unreliable navigation route for large boats since its flow depth was only adequate during the early summer. Since the most lucrative fur trade was further north, the study area received limited attention. Other than occasional use of the river by steam powered paddlewheel cargo boats, the use and management of the river remained limited to meeting domestic water needs and small craft transportation.

By the middle of the nineteenth century it was becoming apparent that the prairie region might support more than a fur trade economy. Explorers, Captain John Palliser (1857) and Professor Henry Yule Hind (1858) were dispatched to the region to report on the economic potential. They reported that the region had poor agricultural potential. It is interesting to note that these explorers expressed interest in the South Saskatchewan River for its transportation potential. Development of transportation canals was at its peak in Europe and eastern North America at that time. They noted that the South Saskatchewan River could be diverted into the Qu'Appelle River Valley by a dam about 26 m high, creating a navigable channel stretching from Lake Winnipeg to the Rocky Mountains.

After acquiring Rupert's Land from the Hudson's Bay Company in 1870, Canada commissioned surveys to assess the agricultural potential of the prairies. The Macoun report predicted that 95 percent of the land would be suitable for agriculture, contradicting earlier survey results. The Dominion Lands Act was passed in 1872, authorizing homesteading in this region and the agricultural settlement of the region was started.

2.2 RIPARIAN WATER RIGHTS (1872 TO 1894)

Being a British territory in the 1800s, the prairie region was governed by English common law which limited water use to riparian land owners. That is, persons granted property rights adjacent to the water courses had certain rights to the water as well. They had the right to use the water and to continue to receive the water passing their property substantially undiminished in quantity and quality.

This doctrine of riparian water rights had several shortcomings in relation to the prairie geography.

First, only land adjacent to a stream had access to water. In the prairie region streams are widely spaced and very little land would have access to water. As a result, the riparian owners enjoyed a unique advantage over their neighbours who were physically removed from the water course. They could water their stock and enjoy the water for domestic and other uses as long as they did not substantially diminish the flow to their downstream neighbours.

Second, even the riparian owner was limited because the flow could not be substantially diminished to downstream neighbours. In the semi-arid prairie region most streams are small and have periods of very low flow when even a minor use would substantially diminish the flow. Even on the larger rivers, the actions of a large number of riparian users could diminish the downstream flow in periods of low runoff.

An additional problem was the lack of a reliable definition of "substantially diminish". Anyone who proposed a water development could not know whether the investment would produce long term benefits until after it was built because a downstream riparian land owner might challenge the upstream use and, if successful in court, stop the use.

2.3 NORTHWEST IRRIGATION ACT (1894 TO 1930)

By the 1880s it was apparent that a major population growth in the prairie region was about to occur as the railway established a reliable transportation link. It was also apparent that the geographic conditions would not permit any significant agricultural development under a riparian doctrine as contained in Common Law. Widespread drought conditions in the late 1880s had demonstrated the need for greater water management involvement by government. Therefore it was necessary to pass a Statue Law to supersede the Common Law.

In 1894 the Northwest Irrigation Act was passed by the Dominion government. This Act applied to the Northwest Territories which at that time included Alberta and Saskatchewan. Although it's title referred to irrigation, the Act established a water management code for all water diversions.

This act vested the right to and the property in all water with the Crown and provided for a system of allocation of water to users. Prior to 1894 no one could own water but riparian land owners could use it if they did not substantially reduce the supply or quality. After 1894 the water was owned by the Crown on behalf of the national government and water could be used if a government allocation was assigned. Water rights were based on the date of application with the earliest projects having first right to water.

The riparian rights to water were not totally removed. Riparian land owners were allowed to use water for domestic uses including household use, stock watering and lawn and garden watering without a government allocation. All other water use was only allowed under government license.

The concept of assuring long term access to water established in 1894 encouraged investment in projects to divert water for beneficial uses. Diversion canals were constructed in the Alberta foothills where the topography permitted gravity diversion to areas of irrigable land. In Saskatchewan the South Saskatchewan River is in a relatively deep valley so gravity diversion to large irrigation areas was not practical. Most development in Saskatchewan occurred on tributary streams such as Swift Current Creek where the topography allowed small gravity diversion projects. The main river remained relatively untapped in Saskatchewan in this period.

The Northwest Irrigation Act administered by the federal Department of the Interior was the main legislative authority for water management in the Basin from 1894 to 1930. During this period the population of Saskatchewan and Alberta grew rapidly and the region was transformed from a wilderness into an agricultural economy with much of the land in the South Saskatchewan River Basin farmed.

In this era of the early 1900s the physical infrastructure for significant water management was limited to works which diverted water from the streams to canals which conveyed flows to water users by gravity flow. Major dams which could control or regulate flows were beyond the technological and economic capabilities of that time. High value uses such as municipalities and industrial uses, such as water supplies for steam railway locomotives, required pumping facilities to divert water. In the headwaters or tributaries small dams captured water for later seasonal use but major water controls were not developed.

The only physical capability to manage the resource was the ability to withdraw water for delivery to users off the stream. There was no management of the resource in terms of regulating flows to reduce flooding or increasing low flows. The river and tributaries provided their natural regime moderately diminished by upstream uses.

In the period prior to 1930, governments were not generally involved in direct investment in water management. Government encouraged developments of the water resource which would improve economic and social conditions but the actual investments were made by the private sector. In spite of the lack of direct investment, government provided substantial support for irrigation development. The Department of the Interior devoted substantial resources to topographic and hydrographic surveys. The government also set aside substantial blocks of land as an incentive to private development of irrigation. Several large irrigation projects were constructed in the Alberta portion of the basin under this program. In the Saskatchewan portion of the basin developments were limited to individual land owners initiatives on the tributaries, mainly Swift Current Creek.

Water pollution was not a major concern and management of the water quality was not a significant activity beyond the monitoring of public health aspects of municipal water supplies.

2.4 PROVINCIAL WATER RIGHTS (1930 TO 1951)

Although the provinces of Alberta and Saskatchewan were created in 1905, the federal government retained control of water and other natural resources until 1930. The Natural Resources Transfer Agreement of 1930 and a subsequent amendment in 1938 moved resource management to the provinces.

The province of Saskatchewan adopted the main provisions of the Northwest Irrigation Act in the Water Rights Act. The Water Rights Act was the dominant water resource legislation from 1930 to 1984 when it was repealed. Water allocations made by the federal government prior to 1930 continued in force and new allocations by the province were added.

Provincial administration of water rights was transferred through several agencies. In the early years, it was assigned to existing agencies including the Departments of Natural Resources and Agriculture as a secondary activity.

Although the administration moved from federal to provincial and from agency to agency; and the legislation was modestly changed, the same basic statutory provisions for water allocation functioned from 1894 to 1984.

The Water Rights system provided a process whereby a potential water user could apply for the right to withdraw water for beneficial uses such as municipal, industrial, irrigation and others. The responsible government agency would review the application and if water was available and the proposed use would not interfere with other earlier uses, the project was authorized for construction. Upon completion of the project, after an inspection confirmed that it conformed to the plans, a license was issued and the user was reasonably sure of access to water for an indefinite future.

In the event of water shortage in drought periods the project with the earliest date of application theoretically had first right to water after domestic riparian users.

The Act also provided that more important users such as municipalities could expropriate less important uses if necessary by compensating for their investment. The provision was never used.

This Act was mainly designed to administer water uses which required withdrawals from the streams and lakes with emphasis on uses like municipal, industrial and irrigation which can significantly deplete the flows. Although the Act provided for "other" uses, it did not provide detailed provisions for these other users comparable to the main uses. The administrators were therefore reluctant to apply the act to all uses and certain users such as waterfowl projects were typically issued authorizations for construction but not licensed for a specific quantity of water.

Because of hydrologic differences, the Water Rights Act was applied in two different ways within the South Saskatchewan River Basin study area. Water users along the main stem of the river and users in tributary areas were treated differently.

2.4.1 Mainstem Water Uses

The main river had a reliable flow which greatly exceeded the consumptive uses. Prior to closure of Gardiner Dam the total use of water was less than 1 percent of the flow. There was no competition among users. Therefore all applications could be approved as long as they were for a beneficial use of the water. A generous allocation of water was assigned to users to ensure that they could get the maximum potential benefit. For example, irrigation projects were assigned a 600 mm duty of water which is more than they can use in practice.

2.4.2 Tributary Water Uses

On the tributaries in Saskatchewan the flows were much less generous. On most tributaries the only runoff is the brief spring freshet. On the largest tributary, Swift Current Creek, the spring freshet provides most of the annual water supply but there is usually a modest base flow throughout the year. The base flow was found to be required for riparian domestic requirements so consumptive uses could only be based on the spring freshet. Therefore, the users must draw their water in spring for spring flood irrigation or provide water storage to save the water for use in other seasons. The licensing process recognized the flow limitations by limiting use, withdrawal or storage of water to the high runoff season. That is, the license does not provide for use when the user needs the water, it provides for diversion when the water is available. It was up to the user to arrange to either use the water in spring for spring flood irrigation or to develop reservoirs so he could divert the water into storage in spring for use later.

In addition to the seasonal variability, the runoff varies from year to year. In theory, under the Water Rights Act, the administrators could license any amount of water use. The earliest licence would get their water first in times of shortage and the later licences would only get water in wetter years when excess was available. Some limitation of the number of licences was necessary because, in practise, the oldest projects were not necessarily upstream of the newer ones and excessive development would lead to inevitable conflict. There was also the expectation that if a government administrator licensed a project, the owner should expect to receive water. Even though the law did not make that guarantee, the expectation was common.

On the other extreme, the administrators could not limit the licences to the minimum stream flow because in all but the driest years the majority of the resource would be unused while potential beneficial users were denied access. The administrators therefore reached a compromise basis for allocation which allowed licensing as long as the user had a reasonable chance in any year of receiving his expected supply without depriving riparian users or earlier projects.

In the Swift Current Creek Basin no new water uses have been permitted since the late 1970s because the existing development exceeds the capacity of the stream in drought years and water supply studies indicate that shortages can be anticipated in about 30 percent of the years. Individual users are limited in the quantity of water as well. For example, irrigation projects are limited to 0.3 m duty of water.

2.5 WATER POWER MANAGEMENT

The Northwest Irrigation Act and Water Rights Act regulated water uses which involved removal of water from the natural water course. They did not regulate instream use of the water. A major instream water use is electric power generation. Legislation to regulate water power parallelled water use legislation. The Dominion Water Power Act regulated water power prior to 1931 and The Water Power Act of Saskatchewan regulates water power development since 1931.

Water power developments of significance to the study area have all occurred since 1960 under the provincial legislation. In 1962 the E. B. Campbell Generating Station began power production on the Saskatchewan River and in 1968 the Coteau Creek Generating Station began production at Gardiner Dam.

The Water Power Act ensures that only one enterprise will be able to harvest the power from the potential energy of falling water in any location so that no conflict can arise. The Act provides for the orderly development of power projects.

2.6 DEVELOPMENT PROGRAMS (1930 TO 1952)

The Northwest Irrigation Act, Water Rights Act and Water Power Act established a regulatory system for water allocation which permitted developments to proceed with some assurance that a long term water supply would be available. During early settlement of the prairie region this regulatory system was all that was needed to permit water development to keep pace with the settlement of the region. The earliest projects utilized the reliable base flows and took advantage of natural topography to pond and divert water by gravity to the users.

Once the reliable base flows and most advantageous topographic features had been developed, unit costs of water development began to rise. The drought of the 1930s demonstrated that water supplies that had previously been considered adequate would require significant additional expense. Broader financial support through government programs was required in order to provide a water infrastructure to meet the needs of a modern society.

2.6.1 PFRA

In 1935 the federal government undertook a major initiative in soil and water conservation through the Prairie Farm Rehabilitation Administration (PFRA). Through PFRA, the federal government has assisted farmers with developing water supplies for domestic and irrigation needs; has assisted the urban communities which serve the farming community to develop municipal water supplies; and has participated in major multi-purpose water developments like the South Saskatchewan River Project. In addition to continuing the technical assistance and surveys of earlier government programs, PFRA introduced government participation in the financing, ownership and operation of water developments.

During its early years PFRA encouraged and assisted many individual farmers to develop on farm water management with dugouts and wells for domestic supplies and small irrigation projects. In addition, multipurpose projects such as the Lac Pelletier (19??) control structure and Duncairn Dam (1942) forming Duncairn Reservoir were developed to provide physical control of waters in the Swift Current Creek Basin.

On the mainstem of the South Saskatchewan River works to assist irrigation in Alberta were undertaken and detailed investigations for the South Saskatchewan River Project were initiated in the 1940s. The Saskatoon weir which stabilizes water levels in that city was built in 1939.

2.6.2 Provincial

While the province began to be involved in managing the water resource in the 1930s that involvement was mostly regulatory until the 1950s. The province relied on the federal government, PFRA, for government programs to develop the water resource.

2.7 THE SOUTH SASKATCHEWAN RIVER PROJECT (1952 TO 1969)

2.7.1 Royal Commission

Proposals to physically manage the South Saskatchewan River in Saskatchewan had been suggested as early as the 1850s. Because this is the only major reliable water source in southern Saskatchewan, such proposals regularly resurfaced and as early as the 1920s an attempt to divert water overland to Moose Jaw was tried and failed.

In the 1940s, PFRA began detailed engineering investigations to determine the feasibility of developing a reservoir to provide some control over the flows of this river. They investigated many potential sites for the dams and found that, at any location, the project would be difficult due to poor foundation conditions but that dams in the vicinity of the present Gardiner and Qu'Appelle River Dams could be constructed. The resulting reservoir would provide the best opportunity for regulating the river flow; irrigation and power development; municipal and industrial water supply and wildlife, fisheries and recreation.

By the early 1950s these technical investigations, financed by the federal government, had reached a stage where serious consideration of a project was required. In view of the magnitude of the project the federal government appointed a Royal Commission on the South Saskatchewan River Project to conduct an inquiry into:

> "Whether the economic and social returns to the Canadian people on the investment in the proposed South Saskatchewan River Project would be commensurate with the cost thereof; whether the said Project represents the most profitable and desirable use which can be made of the physical resources involved."

The key findings of the Commission as contained in its 1952 report are summarized in the following subsections.

ESTIMATED COST OF THE PROJECT

The Royal Commission estimated the cost of the project as follows:

Main Works and Reservoir	$139 800 000
Power Plant	24 000 000
Irrigation System	45 000 000
Pumping Station	30 000 000
Land Acquisition	9 100 000
TOTAL	$247 900 000

These costs assumed a start on construction within two years and provided for inflation and interest during construction. A minimum six year construction period was assumed and it was assumed that full irrigation development would coincide with completion of the reservoir.

ANTICIPATED DIRECT BENEFITS OF THE PROJECT

Various benefits of the project were anticipated. Major benefits are described below.

Irrigation: The direct benefits of irrigation production were found to be very sensitive to commodity prices. The Commission evaluated three commodity price scenarios. The low option, based on the average from 1921 to 1940, was dominated by low prices of the 1930s. A long term average, 1921 - 1948 resulted in more optimistic prices. A third option, using 1951 prices which were relatively high, was also considered.

The rate of irrigation development also affects the benefits. The Commission assumed a three stage development: in the first five years, water use and basic practices would be developed; a transition period would extend over the next 30 to 50 years as water uses would be improved and crop specialization established, and the final period of mature operation would follow.

The benefit of irrigation was identified as the value of irrigated land after 35 years. Using the average 1921 to 1948 prices, a land value enhancement of $96 million was estimated as the direct benefit of irrigation.

Hydroelectric Power: The Commission used an estimated firm energy production of 375 million KWh per year and an average annual secondary generation rate of 100 million KWh as the power potential of the project. An annual requirement of 50 million KWh was deducted for energy used for irrigation pumping to arrive at the net commercial power which would be sold at 5.5 mills for firm energy and 3 mills for secondary energy. The average annual gross revenue was estimated at $27.237 million. After deducting annual operating cost of $1.2 million, the capital value of energy was estimated at $26 million.

The Commission assumed that the reduced power generation downstream due to reduced flows would be offset by improved river control.

Municipal Water Supply: The Commission estimated that annual pumping costs to deliver water to Buffalo Pound Lake of $150 000 would be eliminated and that at 3.5 percent interest, this saving would have a capital value of $4.3 million.

Other Benefits: The commission discussed in general terms the indirect benefits of the project in stabilizing livestock feed supplies, increased employment, population and community life, tax revenue and recreation. One indirect benefit, reduced farm assistance payments was estimated at $368 100 per year for a capital value of $10.5 million.

SUMMARY OF COSTS AND BENEFITS

The Commission summarized the economics of the project as follows:

Particulars:		Value in $1 000s
Original Capital Cost		$247 900
Land Acquisition (years 1-20)		9 100
		$257 000
Deduct:	Capital Value of Power	26 000
	Municipal Water Service	4 300
	Relief Savings	10 500
		$216 200
Add:	Accumulated Deficit (Year 35) simple interest, 1921-48 prices)	190 000
		406 200
Deduct:	Land Value or Irrigated Area (Year 35: 1921-48 prices)	96 000
Balance	Deficit at Year 35	$310 200

The Commission reported ten "Finding and Recommendations". The first three related directly to the project and are quoted here:

1. "The Commission finds that at present the economic returns to the Canadian people on the investment in the proposed South Saskatchewan River Project (Central Saskatchewan Development) are not commensurate with the cost thereof; though the Project would yield social returns which, while they cannot be measured for the purpose of this report, would be of great value to the region in which it is situated.

2. The Commission recommends that, when the time comes that the Project represents the then best use of water for irrigation, the present findings should be reviewed in the light of changing conditions. Among others, the following considerations might be taken into account:

   (a) The prospect of adequate markets for the specialty crops, such as sugar beets, canning vegetables, potatoes, etc., that could be grown on the area it is proposed to irrigate;

   (b) The Canadian demand for farm products which, when it comes more nearly into balance with production, would require a more intensive use of land resources;

   (c) A significant change in relationship of the price of farm products and construction costs;

   (d) The necessity for the construction of public works for the relief of unemployment.

3. The Commission finds that the available data, which are by no means complete, indicate that the said Project does not represent the most profitable and desirable use which can be made of the physical resources involved."

Additional recommendations emphasized the need for continued efforts to improve the data base in order that future evaluations could be conducted more efficiently.

2.7.2 Project Initiation and Construction

From 1952 to 1957, engineering, agricultural and economic investigations of the project were continued by Canada and Saskatchewan. Although the project construction was not initiated, funding for investigations, planning and design continued. In the federal election of 1957, construction of this project was raised as an issue by the Progressive Conservative party, who formed a minority government after the election. This new government began negotiations with the provincial government in 1957 for development of the project. In 1958, agreement on the project was reached and was approved by Parliament and the Provincial Legislature.

The following briefly summarizes some of the key points in the agreement.

Canada would build the main dam, since named Gardiner Dam, the Qu'Appelle River Dam and the reservoir. Saskatchewan would pay one quarter of the cost of these works to a maximum of $25 million. In addition, Saskatchewan accepted responsibility for developing the hydroelectric potential of the project and water distribution cost. Although the ultimate irrigation potential was expected to be 500 000 acres, the agreement only committed Saskatchewan to provide water to 50 000 acres in the first three years after project completion. Through this agreement, Saskatchewan assumed responsibility for the federal government's 1950 commitment to supply water at Buffalo Pound Lake in the Qu'Appelle Valley for Regina and Moose Jaw.

Upon completion of the dams, the project would be turned over to the province to operate. Canada would provide full maintenance of the main dams and reservoir for the first ten years with Saskatchewan paying half the cost from year seven to year ten. Although Canada provided a warranty on the project against major problems for its first 25 years of operation, Saskatchewan would become responsible for the normal maintenance costs after the first ten years. Construction began in earnest in 1959 and was officially completed March 31, 1969. Some significant dates during construction are noted below:

1958:	Roads, headquarters and the construction bridge built.
May 27, 1959:	Official inaugural ceremony.
February 14, 1964:	River closure marked the first ponding of water in the reservoir.
1967:	Diversion of water to the SSEWS canal.
September, 1968:	First hydroelectric energy generation.
1969:	Official transfer to Saskatchewan, and establishment of the South Saskatchewan Reservoir Board.

2.7.3 Project Description

FEDERAL PROVINCIAL COST SHARED WORKS

The South Saskatchewan River Project is comprised of the Gardiner Dam located in the South Saskatchewan River Valley about 30 km south of the town of Outlook; the Qu'Appelle River Dam located about 30 km southeast of the town of Elbow; the reservoir known as Lake Diefenbaker; a power house at Coteau Creek to generate hydroelectric power; and irrigation facilities.

Gardiner Dam is a zoned earth fill 64 m high and 5 000 m in overall length. The width at the base is 1 600 m. The total volume of the embankment is 65 million m^3. Five gated diversion tunnels with an inside diameter of 6.1 m and an average length of 1 320 m were built to convey river water during the construction period. The spillway is located to the west of the main embankment. The spillway crest is 161 m wide and the total spillway length is 1 170 m. The design discharge capacity is 7 500 m^3/s. The spillway, diversion tunnels and other structures contain 501 000 m^3 of concrete. The upstream slope of the dam is protected by 352 000 m^3 of rock rip rap. Seepage through the dam and underlying river sands is controlled by an elaborate system of filter sand and gravel, relief wells and drainage conduits.

The Qu'Appelle River Dam is a zoned earth fill 27 m high, 3 300 m long and 580 m wide at its base. The total volume of embankment is 10 million m^3. A gated concrete conduit provides for gravity releases of water to the Qu'Appelle River system. There is no spillway on this dam. The upstream slope of the dam is protected by 215 000 m^3 of rip rap.

Lake Diefenbaker occupies about 210 km of the South Saskatchewan River Valley and about 15 km of the Qu'Appelle River Valley. The total storage capacity is 9.4 million cubic decameters (dam^3) with the usable portion being 4 million dam^3. This full usable storage requires reservoir water levels varying over a range of almost 12 m. The surface area of the lake at full supply level is 43 000 ha.

PROVINCIAL WORKS, FIRST TEN YEARS

SaskPower, the provincial power utility, converted three of the Gardiner Dam diversion tunnels into penstocks by lining the downstream portion with steel. The cost of lining the tunnels was a shared cost between Canada and the utility. A power station with three turbine/generator units was constructed at the outlet of these tunnels. The rated capacity of the generators is 187 500 K.W.

The Saskatchewan Department of Agriculture dredged the upper Qu'Appelle River in order to permit controlled water delivery from Lake Diefenbaker for irrigation, recreation, wildlife and municipal users. The Department of Agriculture also built a major pump station and canal system to deliver water to irrigated land in the Outlook area and to Broderick Reservoir.

The Saskatchewan Water Supply Board developed a series of canals and reservoirs which convey water from Broderick Reservoir north and east as far as the town of Lanigan. This delivery system supplies irrigation, recreation, wildlife, industrial and municipal water users.

2.7.4 South Saskatchewan River Development Commission

While Canada, through PFRA, was responsible for constructing the main dams and reservoir, the province was responsible for constructing works to utilize the water. Several agencies of the province were required to be involved:

Agriculture - Irrigation
SaskPower - Hydro Development
Natural Resources - Recreation, fish and wildlife.

In order to co-ordinate the provincial activities a commission with representatives of these agencies and a small staff was established. This commission represented the province on implementation of the project from 1958 until 1964.

2.7.5 Saskatchewan Water Resources Commission

In addition to development of the major South Saskatchewan River Project, Saskatchewan was changing from an agricultural society to a more urban and industrial society in the 1960s. Water issues were taking increasing importance with these changes. The provincial government decided to place more emphasis on water resource management by establishing the Saskatchewan Water Resources Commission in 1964.

This commission took over the co-ordination of the provincial aspects of the South Saskatchewan River Project and assumed responsibility for regulatory aspects of water management through administration of such acts as Water Rights, Water Power and Ground Water. Water development activities remained with other agencies. The commission only assumed the regulatory functions.

The increasing urbanization and the demand for water and sewer services had created the need for an increasing government involvement in water quality management. Prior to the 1960s governments were able to limit water quality management to the public health aspects related to drinking water. By the 1960s urbanization, industrialization and even changing farm practices with greater chemical use had made it necessary for public health administrators to trace pollution to its sources in order to advise on appropriate treatment to protect the health of the consumer.

In 1967, water quality was added to the responsibilities of the Commission. The Department of Health continued to have responsibility for health aspects of water but the responsibility for managing the quality of rivers and lakes was transferred to the Commission along with staff who had been developing the necessary expertise.

2.8 PRAIRIE PROVINCES WATER BOARD

The major rivers of the southern prairie region follow the general slope of the topography from west to east. Because of the "rain shadow" effect of the Rocky Mountains much of the water originates in the headwaters area of the major streams. The rivers are conveyance channels carrying the water across the relatively dry prairie region. When the region was a single jurisdiction, water administration in this geographic situation was less complex than after human boundaries divided the region into provinces, each with independent authority to manage water resources.

Orderly water development required a forum for co-ordination. Therefore, in 1947, by Orders in Council of the four jurisdictions the Prairie Provinces Water Board (PPWB) was established with members from Canada, Alberta, Saskatchewan and Manitoba. Canada provided administrative support for the Prairie Provinces Water Board at PFRA.

The Board's mandate was to recommend the best use to be made of interprovincial waters and to recommend allocation of the water among the provinces.

Although water development at the time of its formation was only modestly impacting on flows, it was recognized that the potential existed for future projects to very significantly change the flows. Initially the Prairie Provinces Water Board was concerned with assembling information regarding flows and water use. The South Saskatchewan River was the most heavily developed river and because of its location in the southern prairie it had the greatest potential for water use. Therefore much of the emphasis was on this river.

Through the 1950s the Prairie Provinces Water Board provided a forum for information exchange and assembled a wide range of information on the hydrology of the prairie region. By the late 1950s and early 1960s water use for irrigation in Alberta which had steadily progressed for over 50 years was consuming a significant portion of the flows. Saskatchewan completed the hydroelectric development on the Saskatchewan River at Squaw Rapids (E. B. Campbell Hydroelectric Station) and construction of the South Saskatchewan River Project was started in 1958. Manitoba had completed the first of a series of hydro projects on the Nelson River and the Grand Rapids hydro project on the Saskatchewan River by the early 1960s. These projects in all three jurisdictions were dependant on the same water resources and all three provinces had potential developments of this water at additional locations.

Neither the upstream or downstream provinces could presume that the water was theirs. The only legislation regarding water allocations was provincial and the laws of one province couldn't determine the rights to water in the other provinces. Therefore the common law of riparian rights might have applied or some other judicial decision may have been applied if a dispute arose.

Since the federal and provincial governments already had established the Prairie Provinces Water Board as an administrative structure and since the provinces recognized the need to establish an agreement on the equitable sharing of the common water resource, after lengthy negotiations, on October 30, 1969, Canada and the three Prairie Provinces entered into an agreement to share the flow of eastward flowing interprovincial streams. The Master Agreement on

Apportionment established a formula for sharing the flow of the common eastward flowing rivers and set up a reconstituted Prairie Provinces Water Board to oversee and report on the Master Agreement and to perform other coordination activities and investigations of common interest to the prairie region. A copy of the text of the Master Agreement is contained in Appendix B.

In general, the Agreement sharing provides for equal sharing of the natural flows at the provincial boundary. Because of the early heavy development of the South Saskatchewan River in Alberta the formula for this stream includes several special provisions.

Alberta is entitled to divert or store a minimum of 2 590 000 dam^3 of water even if that exceeds 50 percent of the flow, provided that Alberta does not use more than half the natural flow if it would reduce the flow to less than 42.5 m^3/s. This basic allocation to Alberta was necessary to protect allocations which Canada, under the Northwest Irrigation Act, and Alberta had made to existing and committed projects. The base flow provision for half the flow at 42.5 m^3/s recognized the need to protect basic riparian water needs. Although the Red Deer River enters the South Saskatchewan River downstream of the Alberta/Saskatchewan border, the Agreement specifies that the apportionment calculation can combine the two streams as if they joined upstream. The Agreement specifies that the balance period is the calender year with adjustments during the year on an undefined equitable basis.

On its east border, Saskatchewan becomes the upstream province and the Agreement commits Saskatchewan to delivery of half the water received from Alberta plus half of the local natural inflow, to Manitoba. This agreement specifies a balance period from April 1 to March 31 with adjustments during the year.

The Master Agreement recognized that water quality was becoming an issue in the 1960s but because the data available was very limited, the agreement could not define specific water quality sharing. It was agreed to consider water quality problems through the Prairie Provinces Water Board.

2.9 RECENT PERIOD (1969 TO 1984)

By 1969 the physical infrastructure to manage the water resources of the study area were quite advanced.

In the Swift Current Creek Basin, Duncairn Reservoir had been in operation since 1942. The Swift Current Irrigation Canal and smaller reservoirs associated with urban and irrigation water use were in place. These storage and diversion works provided for substantial control of the flows of Swift Current Creek most years.

In Alberta, hydroelectric reservoirs in the headwaters had been built and were modestly stabilizing seasonal flows by storing high summer runoff for release in winter. Irrigation developments had reached the point where the Alberta share of low flows were fully utilized and occasional shortages were encountered in drought years.

Gardiner Dam and the Lake Diefenbaker reservoir in Saskatchewan was complete so that the river flows could be regulated for Saskatchewan uses for the first time. Diversion works to convey water to Saskatchewan irrigation, industrial, municipal and wildlife projects away from the river were possible. Downstream of the South Saskatchewan River, the main water use was for hydroelectric power generation at the E. B. Campbell station in Saskatchewan; the Grand Rapids project on the Saskatchewan River in Manitoba and on the Nelson River in Manitoba.

The federal government was involved through PFRA, in programs to assist with water conservation ranging from individual dugouts and wells, through community water supplies to multi-purpose reservoirs. Energy, Mines and Resources was involved in programs such as Water Survey of Canada to assemble information on the water resource. The federal departments responsible for fisheries, health and transport also had an interest in limited aspects of the water resource.

At the provincial level, the central water planning and management authority was the Saskatchewan Water Resources commission which had regulatory responsibility for allocating surface and ground water, administering water power, planning the operation of provincial projects and fledgling efforts to manage water quality by regulating pollution discharges. Saskatchewan Agriculture was involved in assisting farmers to develop irrigation and drainage projects through technical and financial assistance programs. SaskPower managed the electric utility which depended on hydroelectric and thermal power stations in the study area. The Saskatchewan Water Supply Board was a provincial utility developing industrial municipal and wildlife water supplies based at Lake Diefenbaker. Other departments dealing with parks, recreation, fisheries, municipal affairs and other special interests were interested in limited aspects of the water resource.

The management of water quantity and water use was well established with a long history of experience and resource data to draw upon. The management of water quality as it related to human health was well established in terms of dealing with water as a consumer commodity at the point of consumption but experience in other jurisdictions was demonstrating that water quality management must extend to the rivers and lakes that are the source. Although it was new compared to water quantity management, the importance of water quality management was being recognized in the late 1960s.

Between 1969 and 1984, a major influence on water management was the growing awareness of environmental issues. The water environment and prevention of water pollution were given a growing emphasis through this period.

Canada established the federal Department of the Environment in 1970 by transferring existing water planning and monitoring functions and expanding water pollution and environmental assessment responsibilities. Saskatchewan similarly set up a Department of the Environment in 1972 which took over the water management activities of the Saskatchewan Water Resources Commission with expanded water pollution control and environmental assessment responsibilities.

During this period water development activities of several provincial agencies were expanding. The Department of Agriculture had assistance programs for wetland reclamation and irrigation; the Saskatchewan Water Supply Board operated a multi use water supply utility in a limited area of the province; the Departments of Urban Affairs and Northern Saskatchewan had assistance programs for urban water and sewer developments and other agencies had water related programs.

In 1984, the Saskatchewan Water Corporation Act was passed to consolidate many aspects of provincial water resource management in one agency. With establishment of this provincial agency, the current legal and administrative structure described in Chapters 3 and 4 was in place.

3.0 THE LEGAL FRAMEWORK

3.1 INTRODUCTION

The legal regime governing water in the South Saskatchewan River Basin is complex. Three levels of government, many administrative bodies and individual citizens attempt to interpret their legal rights in relation to this highly-demanded, constantly moving resource. This chapter describes the legal regime which governs water management on the South Saskatchewan River by examining surviving common law, the framework of constitutional law and federal, provincial, and local statutory mechanisms presently in place.

3.2 COMMON LAW AND EARLY LEGISLATIVE HISTORY

The legal basis for water management may be traced to the English common law of real property. As a fundamental starting point, all land was and is still owned by the Crown. The Crown may grant certain interests in the land. A landowner does not own the land as such, but owns an estate or interest in the land. Ungranted lands remains Crown Lands.

Once granted, certain rights and obligations commensurate with the grant arose; the right to use and enjoyment, the right to alleviate the interest, the duty not to use one's property in a manner which would unreasonably interfere with the neighbour's use and enjoyment. Some of the incidents to the grant included the right to physical support of the property, both lateral and sub-adjacent, the exclusive use of air space above the property (to the heavens), the right to wild game on the property, and water rights.

Although no one could own flowing water outright, persons granted property rights adjacent to water courses or who were granted an interest in the bed of a water course, had certain rights in relation to the flowing resource as well. These included the right of access to the water and to receive that water passing by their properties substantially undiminished in quality and quantity. Those who claimed an interest in the bed enjoyed additional rights in relation to the fish in the waters above their property. The right formed part of the grant and passed with the property interest.

As a result of these rights appurtenant to the property interest, the riparian owners enjoyed a unique advantage over their neighbours who were physically removed from the water course. They could, for example, water their stock and enjoy the water for domestic use as well as for other uses as long as they did not substantially diminish the flow to their downstream neighbours.

In addition, riparian owners enjoyed other rights; most importantly, access to the water, and the right of accretion. Any violation of the riparian right was actionable and the owner of the right was entitled to nominal damages even though he or she could not establish actual damages.

The public at large enjoyed the rights of navigation and flotation and the right to fish over those parts of the bed not privately owned.

Although Canada inherited the common law relating to riparian rights, the uniqueness of western geography led to an early recognition of shortcomings in the riparian rights doctrine. In essence there were three problems which stemmed from the scarcity of water on the prairies:

(1) Property remote from water sources remained undeveloped;

(2) Major consumptive uses which would substantially affect flow were denied to riparians;

(3) Priority between riparian users was unclear.

As with all aspects of the common law, statute law can codify, modify, or change the existing regime. In the case of riparian doctrine, although the label of "riparian" still survives, the rights and obligations associated with this particular incident of property have been fundamentally changed by legislation.

These changes began with the passage in 1894 of the Northwest Irrigation Act, by the federal government. Pursuant to this legislation, the right to and the property in all water vested with the Crown; the resource which under the common law could not be "owned", became the property of the Crown. The statute provided for a system of allocation based essentially on the principle of first come, first served.

When Saskatchewan achieved provincial status in 1905, the federal government continued to control natural resources and consequently water and water management until 1930. Unfortunately, the Natural Resources Transfer Agreement of that year left some question as to whether or not water rights were included within the agreement. It was not until 1938 that a retroactive amendment to that 1930 transfer clarified the provincial ownership and control of the resource.

The province of Saskatchewan adopted the federal model and continued allocating rights in a manner similar to the federal approach. It was only with the passage of the Water Corporation Act that changes to the traditional allocation model have been introduced.

The extent to which riparian rights remain on the South Saskatchewan still remains open to question and legal debate. One can state unequivocally that the riparian right to domestic use remains codified in the Water Corporation Act. Legal scholars further contend that the riparian right to undiminished quality remains, and thus downstream riparian users would have standing to pursue an action should their neighbours pollute river waters. For the most part, however, rights relating to water use, water quality, navigation, and fishing have become the subject of separate legislative schemes.

3.3 CONSTITUTIONAL LAW

3.3.1 Introduction

As a federal state, Canada, through the Constitution Act, 1867 and its amendments, has divided subject areas of legislative responsibility between the federal and provincial governments. The right to pass legislation in these subject areas is exclusive of the other level of government. Thus to invade a "head of power" assigned to the other level of government will be ruled by the courts as ultra vires and the law of no legal effect.

As with riparian rights, constitutional jurisdiction over water management still remains subject to some question. Both levels of government may claim that certain heads of power support legislation with regard to certain aspects of water management. Unfortunately, very little case law has been decided to date, and thus, any areas of potential overlap and conflict such as fisheries, interjurisdictional waters, and agriculture necessitate cooperation.

3.3.2 Federal Powers

The Constitution Act, 1867 assigned areas of exclusive federal jurisdiction which will impact on the South Saskatchewan River Basin. Specifically, the heads of power are: navigation and shipping (section 91(10)), seacoast and inland fisheries (section 91(12)), Indians and lands reserved for Indians (section 91(24)), any works declared "for the general advantage of Canada or for the advantage of two or more of the provinces" (section 92(10)(c)), and the "peace, order and good government" clause in section 91.

Federal jurisdiction over navigation and shipping involves the control of activities on navigable waterways. The Navigable Waters Protection Act excludes crown agencies (provincial governments). Crown agencies, however, are encouraged to seek advice and clearance of activities affecting navigation from Transport Canada.

Although the provincial governments own the fish, it is the responsibility, with some qualifications, of the federal government to protect and manage the fisheries. The federal government has used this power to regulate activities which impact on fish habitat, fish and passage of fish; the province enforces these regulations. Both governments enforce the regulations relative to the discharge of substances deleterious to fish. Unlike navigation, this area has been considerably more controversial and thus the subject of some litigation. It remains an area of considerable complexity and confusion.

National Parks, Indian Reserves, military lands, and other Federal lands represent federal enclaves wherein the Province cannot make laws. In the case of Indian Reserves, the effect on water management is that arguably, if the beds of rivers are owned by Indians (and this will to a large degree depend on when the Reserve was created), the band may control the use and development of water resources as they pass through these lands.

The federal power under section 92(10)(c) has not been invoked by the federal government since 1961. Although this is a seemingly broad power when one first views the Constitution Act, 1867, David Percy has stated,

> "It obviously has potential application in many more projects, but is probably of limited practical utility because of political repercussions."

The most interesting area of potential federal involvement in water management is the peace, order, and good government power—also known as POGG. The POGG power contemplates federal legislation in subject areas of national dimension not included in either section 91 or 92. For the most part, this power has been used in areas not contemplated in 1867 such as aeronautics. Recently, it has also been invoked in circumstances of national concern or national emergency such as the 1976 Anti-Inflation Reference wherein federal legislative response is desirable. Exactly when such circumstances arise has been the subject of debate and continued political as well as legal harangue.

Potentially, at least, this constitutional power could provide a basis for federal legislation relating to such issues as interprovincial water pollution.

3.3.3 Provincial Powers

The division of powers between federal and provincial governments under the Constitution Act, 1867, coupled with the Natural Resources Transfer Agreement of 1930, assigns the majority of powers in water management to the province, including ownership of the water. Under the Constitution Act, 1867 the province also exercises exclusive jurisdiction over management and sale of public lands (section 92(5)—lands includes water), property and civil rights (section 92(13)), local works and undertakings (section 92(10)), and matters of purely local concern (section 92(16)).

In addition, the 1982 amendment to the Constitution Act, 1867 further strengthened provincial powers: pursuant to 92A(1)(c), provinces have exclusive jurisdiction over the "development, conservation and management of sites and facilities in the province for the generation and production of electrical energy".

In total, then, the provinces have substantial legislative power over water management. However, it is noteworthy that this power is subject to the specific powers assigned to the federal government under that same document.

3.3.4 Summary

In spite of the above articulation of the division of constitutional powers, the practical realities of application result in a very different picture of water management. Alistair Lucas has aptly described the distinction between provincial property rights and federal jurisdiction over enumerated matters related to water as "conceptually neat but difficult to apply". To highlight this difficulty are two questions: How do federal rights of navigation mesh with exclusive provincial jurisdiction over hydroelectric development? Could the federal government veto a provincial development which would interfere with navigation? It is generally believed that the Federal government could only restrict development where the interference with navigation would be serious. This issue remains to be resolved by the courts.

Does the interjurisdictional nature of waters like the South Saskatchewan River offer any unique constitutional justification for greater federal involvement? Each province may legitimately pass legislation which negatively impacts on the water quality or quantity received by neighbouring jurisdictions. Some form of interprovincial co-operation is necessary but the question remains as to whether federal legislation would withstand a constitutional challenge, as such legislation would inevitably infringe on provincial authority.

If one were to view the Constitution Act and its amendments strictly, there exists significant potential for conflict between the federal and provincial governments. However, this narrow view fails to contemplate the predisposition towards co-operation and the desire of both levels of government to alleviate and avoid conflicts regarding the resource.

Just because the province has constitutional authority over water does not necessarily mean it can unilaterally engage in actions which impact on a neighbour. Although a court action has never been brought by one province against another, the court's decision on such an action would be based upon English Common Law, generally accepted international practice expressed in international law and Canadian customary practise such as the apportionment agreement; all of which support the view that the rights of a state within its own boundaries, are subject to the rights of neighbouring states.

Interjurisdictional conflict can be resolved through the Federal Court. Saskatchewan, among other western provinces, has passed legislation permitting such disputes to be heard by the Federal Court as provided for in Section 19 of the Federal Court Act. This dispute resolution mechanism is, however, controlled by the Province. If it wished, Saskatchewan could repeal its Federal Court Act, disallowing access to the Federal Court.

3.4 FEDERAL LEGISLATION

3.4.1 Introduction

As stated earlier in the text, there are specific heads of power enumerated in the Constitution Act which justify a federal role in both water quality and water use management. This section describes Federal statutes pertinent to water management in the South Saskatchewan River Basin. Ministerial responsibility for federal legislation is noted in Appendix C.

3.4.2 The Canada Water Act

The Canada Water Act provides the framework for the federal government to participate and assist in the management of the water resources of Canada, including the research, planning and implementation of programs relating to the conservation, development and utilization of water resources. The preamble of the legislation acknowledges the increased demand upon water resources and the necessity for increased knowledge so that present and future demands may be met. Moreover it discusses the increasing threat to the health and well-being of Canadians caused by pollution of water resources. The legislation states that the quality of water has become an "urgent national concern" and that measures must be taken in order to manage those areas most critically affected. Finally, the preamble addresses the necessity for co-operation between the Government of Canada and provincial governments in relation to water resources.

Part One of the legislation states that the Minister of the Environment may, with the Governor General in Council's approval, enter into agreements with one or more of the provincial governments to formulate policies and programs with respect to the water resources of Canada, and to ensure the optimum use of those resources for the benefit of all Canadians. Such agreements contemplate continuing consultation and advice on water resource matters, the formulation of water policies and programs, and the co-ordination and implementation of such policies and programs. Federal involvement in basin planning, flood damage reduction, and water quantity and quality monitoring is authorized.

In addition, with respect to any waters where there is a significant national water resource management interest, federal/provincial agreements may also address the collection of data regarding quality, quantity, distribution and use of those waters, formulate comprehensive resource management plans, design projects for efficient conservation, development and utilization of waters, and implement any plans.

The Minister may act unilaterally with respect to any federal waters, or any interjurisdictional waters where there is a significant national interest in the water resource management. The Minister must be satisfied before acting that all reasonable efforts have been made to reach an agreement with one or more of the provinces having an interest in the management of the interprovincial waters in question, and that those efforts have failed.

Part Two deals with water quality management. Section 8 is a prohibition against the disposition of waste in or in waters leading to a designated "water quality management area". The exception to this is those prescribed activities contemplated within the management area. A water quality management area is designated pursuant to a federal/provincial agreement in waters wherein non-federal water quality management has become a matter of urgent national concern. Upon designation of such an area a corporation must be established to plan, initiate and carry out, in conjunction with the Minister and the provincial governments, programs in respect of these waters.

If an agreement with the provinces cannot be reached or if an agreement is terminated by virtue of a disagreement over water quality standards set, the Governor General in Council may designate a water quality management area unilaterally. In any event he may do so unilaterally in the case of federal waters.

Water quality management agencies are to plan, initiate, and carry out programs for the restoration, preservation, and enhancement of the water quality in management areas. To pursue this mandate they are empowered to study wastes and make forecasts, and to develop plans and make recommendations to both federal and provincial ministers, taking into account the view of the interested parties. When federal and provincial ministers approve of any plan proposed by an agency, the plan may be implemented in order to design, construct, operate, maintain, and monitor waste treatment facilities. The agency may also undertake the collection of any charges or effluent discharge fees prescribed for waste treatment or waste.

The Governor General in Council may make regulations specifying the quality and type of waste which may be deposited in water. These regulations must have either the recommendation of the agency, or a joint recommendation of the federal and provincial ministers who are party to the agreement and who disagree with the agency's recommendation, in order to have any force or effect in a management area. The Governor General in Council may make regulations prescribing names, quantities and concentrations of substances that may be deposited into a management area. He may also outline the treatments and processes in relation to water within that same area.

Part Three of the legislation deals with nutrients. Specifically, it is a prohibition against the manufacture, use, sale or import into Canada of any cleaning agent or water conditioner that contains a prescribed nutrient in a concentration greater than the specified maximum. Regulations have been enacted which prescribe the nutrients and the maximum permissible concentrations. It is within the power of an inspector to seize such cleaning agents or water conditioners if there has been a violation.

Part Four is general in nature. An inspector may enter premises, vessels, vehicles, or areas where there is reason to believe that any waste or any process which may result or has resulted in waste being added to a water quality management area. The right of entry also extends to locations where the inspector has a reasonable belief that cleaning agents or water conditioners are being manufactured or imported in violation of Part Three.

Offenses pursuant to the legislation hold a maximum fine of $5 000 for every day the offence is committed. The offender may be ordered to refrain from further violation. Interestingly enough, it is sufficient proof of the offence to establish that it was done by an employee or agent of the accused, although the defence of due diligence is available to the "offender". In any case, no civil remedy for any act or omission is suspended or affected by reason of the fact that the act or omission is an offence under this particular legislation.

Phosphorus Concentration Control Regulations

These regulations provide for the maximum concentration of prescribed nutrients (including phosphorus and all of its compounds) in laundry detergent. Although specific standards are set out in the regulations, 5 percent by weight, the Department of Environment is further entrusted with setting the standards from time to time.

3.4.3 Navigable Waters Protection Act

The purpose of this legislation is to keep navigable waters free from obstruction which would hinder marine navigation. The term "navigable waters" is not defined in detail in the Act; the definition is inclusive; it simple states that: "navigable water" includes a canal and any other body of water created or altered as a result of the construction of any work. The Minister or his delegate determine by an on site basis if a waterway is navigable. The Act outlines that no one may build a work in, upon, over, under, through, or across any navigable water unless such work is approved by the Minister prior to the commencement of construction. Further, the work must be built in accordance with the Minister's terms and conditions.

Work is defined as including bridges, booms, dams, causeways, docks, tunnels, pipes, power cables, or any fill or material dumped on the bed of a river, or anything that can interfere with navigation. The prohibition does not apply to works that in the Minister's opinion do not substantially interfere with navigation except bridges, booms, dams, or causeways.

If the work is built without ministerial approval or not maintained according to the approved plans and regulations, the Minister may order the work removed or altered at the expense of the owner.

Where any vessel is wrecked, sunk, lying ashore or grounded in any navigable water and it is deemed to be an interference to navigation, the Minister may order the owner to place an aid to navigation at the site of the wreck and effect removal of the vessel within a specified period of time.

Where any vessel is wrecked, sunk, lying ashore or grounded in any navigable water, it is deemed to be abandoned after a two year period, and the Minister may have it removed after one month's notice.

Sawdust, bark or like rubbish may be not deposited into navigable waters, or any waters which flow into navigable waters if they are liable to interfere with navigation. A further prohibition applies to stone, gravel, earth, cinders, ashes, or other materials which are liable to sink to the bottom, in any water that flows into or is a navigable water where there is not at least 20 fathoms of water or where it is prohibited by any other Act. The Governor General in Council under Section 23 may exempt specified rivers, streams or waters where the public interest is not injuriously affected. Otherwise a maximum of $5 000 fine may be levied for a violation and if the material originates from a vessel, the vessel may be detained until the fine is paid.

Finally, the Governor General in Council may make regulations regarding:

- the laying, stretching or maintaining of ferry cable across, over, in or under navigable waters;
- the maintenance of lights or any other precautions for the safety of navigation in connection with a ferry cable and terminal works constructed pursuant to the Act;
- the opening and closing schedules of swing or draw bridges over navigable waters;
- lights or other precautions connected with bridges;
- prescribing of fees for application for approval;
- prescribing the period of time for which an approval of a work is valid.

FERRY CABLE REGULATIONS

These regulations prohibit the establishment of a ferry cable unless approved by the Minister. The Minister may approve such action if the operation of the cable will not interfere with the safety of navigation. Anyone wishing to establish such a service must submit plans to the Minister regarding the schedule of activity, the type of operation and associated works and the type of lighting system needed to provide maximum safety.

NAVIGABLE WATER BRIDGES REGULATIONS

These regulations apply to fixed and movable span bridges that cross navigable waters. The Minister of Transport may approve the navigation routes under the structure and navigational lighting on the structure. For movable span bridges, the Minister has the authority to approve the opening and closing schedule of the movable span.

NAVIGABLE WATERS WORKS REGULATIONS

Under the Navigable Water Works Regulations, the Minister of Transport has the authority to identify the length of time an approval issued under NWPA will remain valid; to have the owner of a work, place aids to navigation and navigation aids at the site of the work or on the work proper; to set conditions with respect to the construction of dams, the discharge of water through or over the dam and limits of flow and elevation of water; to invoke conditions for lighting and sound signals of Exploration and Development of Natural Resources, whether such development is of a permanent of floating character and whether fixed to the bed or moored; and to apply penalty fees for non-compliance of the regulations.

Where, after January of 1979, the Minister has approved a work under the Navigable Waters Protection Act, this approval is valid for 50 years unless stated to be less. It is the responsibility of the licensee to set up buoys, lights, etc., as required in the approval, and to maintain these safety devices over the term of the approval. This maintenance includes prevention of accumulation of debris or other material on the bed or surface of the water surrounding both the work and the safety devices. The owner of a dam or power plant in navigable waters shall, when required by the Minister,

- run log chutes
- provide roads or footways around the work between the river's upper and lower reaches
- furnish records of water and levels above and below the work
- maintain limits of water flow and depth for navigation as required by the Minister

Where exploration or development of natural resources is taking place in waters or in or on the bed of navigable waters, the work must have prescribed lighting and sound systems.

3.4.4 Prairie Farm Rehabilitation Act

The stated purpose of this Act is "to provide for the rehabilitation of drought and soil-drifting areas in the Provinces of Manitoba, Saskatchewan, and Alberta."

Under the Act, the Governor General in Council may establish Prairie Farm Rehabilitation advisory committees to consider and advise the Minister on the best methods to be adopted to secure rehabilitation of the drought and soil-drifting areas in the Prairie Provinces, and to develop and promote, in these areas, systems of farm practice, tree culture, water supply, land utilization, and land settlement that will afford greater economic security. In response to this advice from the committees, the Minister may undertake the development, construction, promotion, operation, and maintenance of any project or scheme under or by virtue of this Act or enter into agreements with any province, municipality, or person to these ends. Expenditures in a fiscal year on a single project or scheme costing in excess of a specified limited amount require consent of the Federal Treasury Board.

The Governor General in Council may make such regulations as may be necessary or expedient for the effectual execution of this Act.

Early programs under the Act included provisions for rural water development, irrigation in southwest Saskatchewan and community pastures. These were essentially emergency measures designed to deal with the devastation from the sever drought of the 1930s. In 1939, to allow for planning and assistance for water development and soil conservation over the long-term, the Act was amended and PFRA was made a permanent agency.

3.4.5 Government Organization Act

PART THREE: DEPARTMENT OF THE ENVIRONMENT

The Department of Environment was established pursuant to this all-encompassing piece of federal legislation. The duties and powers of the Minister of the Environment to extend to and include all matters over which the Parliament of Canada has jurisdiction, not by law assigned to any other department, board or agency of the Government of Canada, relating to:

- preservation and enhancement of the quality of the natural environment, including water quality
- renewable resources, including forests, migratory birds, and other non-domestic flora and fauna
- water
- co-ordination of federal policies and programs regarding the preservation and enhancement of the quality of the natural environment
- and whatever other matters which are by law assigned to the Minister

Pursuant to these powers, the Minister may initiate and undertake programs to establish objectives regarding environmental quality or to control pollution. Further he may provide for the publication of environmental information, and promote practices and conduct for the better preservation and enhancement of environmental quality. The Minister may advise heads of federal departments, boards and agencies on environmental matters, and may enter into co-operative relationships with such agencies as well as provincial governments.

With the approval of the Governor General in Council, the Minister may establish guidelines for the use of departments, boards and agencies of the Government of Canada and of appropriate corporations in the exercise of their functions related to environmental quality and he may enter into agreements with the provinces regarding the carrying out of programs for which the Minister is responsible.

The Minister may ensure that new federal projects, programs and activities are assessed early in the planning process for potential adverse effects on the quality of the natural environment, and that those with probable significant adverse effects are further reviewed and the results thereof taken into account. This section is in essence the justification for the federal Environmental Assessment and Review Process (EARP).

3.4.6 Environment Assessment and Review Process

This process was established pursuant to 1984 "Environmental Assessment and Review Process Guidelines Order" under the Government Organization Act. It applies to any "initiative, undertaking or activity for which the Government of Canada has a decision-making responsibility"; defined as a "proposal". Although interpreted for many years as an informal "guideline", recent decisions by the Federal Court (Rafferty/Alameda Dam, Oldman Dam) have confirmed its status as a non-discretionary regulation. The process essentially consists of two phases, initial assessment and public review. Initial assessment may include screening or further study or "initial environmental evaluation". If potential impacts are insignificant or mitigable with known technology the process is completed. If potential impacts are significant, unknown or public concerns are significant; the proposal may be referred to an Environmental Assessment Review Panel for a public review. At this stage, the proponent is required to prepare a comprehensive Environmental Impact Statement (EIS) for evaluation by government and the public through formal public hearings. The Panel reviews all relevant input and makes recommendations to the Minister of the Environment and Minister responsible for the proposal on whether the proposal should proceed and under what conditions it should proceed. The federal environmental assessment and review process is currently under review. New legislation; the Canadian Environmental Assessment Act (CEAA, Bill C-78) is presently before Parliament.

3.4.7 Canadian Environmental Protection Act

The Canadian Environmental Protection Act became law on June 30, 1988. It was drafted to update and replace several federal statutes including the Environmental Contaminants Act (thus this statute will not receive separate attention in this chapter) and section 6(2) of the Department of the Environment Act. Of particular impact on this study, Part III of the Canada Water Act dealing with nutrients was repealed but incorporated into this legislation with only minor changes.

The preamble to the Bill cited the national concern with regard to toxic substances in the environment and the perceived role of the federal government as a leader in establishing environmental water quality objectives, guidelines, and codes of practice. Administrative duties under this Act include; the taking of both preventive and remedial measures to: protect the environment, either independently or in co-operation with the provinces; research on environmental problems; establishment of national standards of environmental quality; and dissemination of relevant information. For the purposes of the Canadian Environmental Protection Act, environment does include water.

Section 7 of the Act allows the Minister to monitor research and publish materials related to environmental quality. In addition, and after optional consultation with the provinces, the public or other departments, the minister may formulate objectives, guidelines, and codes of practice aimed at environmental quality. It is noteworthy that these products are not to be introduced as regulations. The primary emphasis of the Act is the prevention of damage to both the environment and public health from toxic substances.

3.4.8 Fisheries Act

Although the Fisheries Act relates to management of a resource, the primary thrusts in terms of water management deal with pollution of waters frequented by fish, the protection of fish habitat and protection of the fish as a resource.

Every slide, dam or other obstruction across or in any stream may be such as to require the owner or occupier of the obstruction to construct a durable and efficient fish-way or canal around the obstruction.

The Minister may require an owner or occupier of any obstruction to permit sufficient water to escape in order to protect fish, spawning grounds, and ova.

The Act prohibits the setting of seines, nets or other fishing apparatus in such a manner as to obstruct navigation.

The Minister may authorize any river or other water to be set apart for the natural or artificial propagation of fish.

No undertaking or work may be carried out which results in harmful alteration, disruption, or destruction of fish habitat unless authorized by the Minister or by the regulations.

No-one shall throw overboard ballast, coal ashes, stones, or other prejudicial or deleterious substance into any river or other water where fishing is carried on, nor may they leave on shore the remains of fish or decaying fish in nets. This does not preclude burying of remains or offal above the high water mark on shore. More importantly, it is contrary to the legislation to leave deleterious substances in waters frequented by fish or in locations where they will reach water frequented by fish. This section does not apply to wastes or pollution authorized by any Act, nor to the deposit of deleterious substances authorized under this Act. Just as these substances cannot be placed in water, individuals cannot place slash, stumps, or debris into water or on ice over water frequented by fish.

After the unauthorized deposit of such deleterious substances into water frequented by fish if there is serious or imminent danger, the Crown may act to prevent, counteract or remedy the deposit and charge the owner, controller or perpetrator of the danger with the costs. The offender may be further liable for the loss of income of licensed commercial fishermen, or other damages pursuant to civil remedies so long as the action is brought within two years from the time that the occurrence could reasonably be known to the Crown or to commercial fisheries. The only proviso that should be placed on this section as a whole is that it does not apply to deleterious substances that originate from ships covered by the Canada Shipping Act.

Anyone carrying on a work or undertaking which is likely to result in the deposit of deleterious substances into water frequented by fish shall, if requested and required, provide the Minister with plans, specifications, samples, studies, etc., so that the Minister may decide if an offence is likely to occur. If the Minister so determines, he may then take those measures necessary to prevent or mitigate the effects. After consultation with interested parties, governments and appropriate federal departments, the Minister may then, with approval of the Governor General in Council, require necessary modifications or restrictions and may direct closing of the undertaking for the necessary period of time. If immediate action is necessary, he may proceed without such consultation.

An inspector may enter anywhere except a private dwelling when he believes on reasonable and probable grounds that an offence is being committed or that a work is being, has been, or is likely to be carried on.

Should an abnormal deleterious deposit occur and damage to fish habitat, fish or use by humans of fish result or may reasonably result, the owner of the substance or the person causing the deposit must report the event and take all reasonable measures as soon as possible to prevent, mitigate, or remedy any adverse impacts. So too an inspector may take necessary immediate action, provided the deposit does not occur in circumstances wherein his actions would be inconsistent with the requirements of a pollution prevention officer under the Canada Shipping Act.

FISH HEALTH PROTECTION REGULATIONS

These regulations outline the necessity for a permit to bring cultured fish or eggs of wild fish into a province. In order to obtain a permit, the local fish health officer must be satisfied that the fish or eggs are free from specified diseases.

FISH OBSTRUCTION REMOVAL REGULATIONS

Where the Minister of Fisheries is "satisfied" that a "natural or casual" obstruction in waters frequented by fish interferes or is likely to interfere with the free passage of fish, he can have the obstruction removed or destroyed, whether the waters are navigable or non-navigable.

CHLOR-ALKALI MERCURY LIQUID EFFLUENT REGULATIONS

These regulations apply to every plant for the production of chlorine and alkali metal hydroxide by means of any industrial process involving the electrolysis of an alkali metal chloride brine using mercury cells. The regulations authorize the deposit of mercury up to a daily limit. The owner of such substances shall install and maintain sampling and analyzing facilities in order to ascertain the daily discharge. In a location where it may be deposited by seepage or other means into water frequented by fish, samples must be taken. Monthly reports to the Minister are required. If effluent is treated for mercury removal at a site outside the plant, it is not considered an effluent for the purposes of these regulations.

MEAT AND POULTRY PRODUCTS LIQUID EFFLUENT REGULATIONS

These regulations do not apply to effluent treated outside a plant to remove deleterious substances, nor do they apply to plants commencing operation before March of 1977 (or expansions thereto).

Deleterious substances are defined as biochemical oxygen demanding matter, including totally suspended matter and grease. These regulations set out daily authorized deposits for different classes of plant and types of effluent, and the sampling procedure necessary to ensure compliance with these requirements.

PULP AND PAPER EFFLUENT REGULATIONS

These regulations address totally suspended solids which are oxygen demanding decomposable organic matters produced as waste and toxic waste, which may be directly or indirectly deposited to waters frequented by fish. The regulations establish the limits of such deposits on an individual plant basis which is pro-rated according to the amount of productivity per day.

Producers of such waste must measure their output and keep records, and undertake some on-site testing in order to determine the exact impact on fish. The effluents must also meet toxicity requirements as measured by the bioassays conducts on rainbow trout. The Pulp and Paper regulations are in the process of being revised.

SASKATCHEWAN FISHERIES REGULATIONS

These are federal regulations passed pursuant to the Fisheries Act. These regulations are enforced by provincial officers holding appointment as federal fisheries officers.

The regulations apply to all waters except those within the national parks, or those pertaining to commercial or private aquaculture licensed waters. Under these regulations, the province issues licenses and regulates species quotas, closing times, net mesh size, and other matters relating to fishing. So too angling, bait, ice fishing, spear and bow fishing, net fishing, commercial fishing, fur farm fishing, domestic, and Indian fishing are regulated.

Under these regulations, no-one may alter the configuration of a bed, bank or boundary, nor remove or displace gravel or sand to waters or from waters frequented by fish. Nor may an individual deposit or otherwise dispose of litter in water or on ice in the province. It is noteworthy that this latter prohibition is not limited only to water frequented by fish.

Finally, these regulations deal with fish entrainment: the owner or occupier of water intakes, ditches, etc., for conducting water from the river shall make necessary provision to prevent the passage of fish into such intakes.

3.4.9 Canada Shipping Act

The Government may make regulations prohibiting, and authorizing in limited quantities, the discharge from ships of specified pollutants into waters. "Ship" includes every vessel used in navigation without regard to method or lack or propulsion.

Pollutant is defined in this legislation as any substance that if added to waters would degrade, alter, or form part of a process of degradation or alteration of the quality of the waters to an extent that it would be detrimental to the use of human, or any animal, fish or plant that is useful to humans. The term also includes any waters that contain a substance in such quantity or concentration that it would cause a similar alteration or degradation. Without limiting the generality of the foregoing, the Act specifically mentions persisant oil and any substance or substances that are part of a class prescribed as a pollutant in Part XV of the Act.

Where any ship has discharged or is in danger of causing the discharge of a pollutant, either contrary to or as prescribed by regulations, the shipmaster shall report the discharge or the danger to the designated officer.

Further, the Governor General in Council may make regulations re:

- substances or classes of substances that are pollutant
- when and how to report the discharge
- fitting of special electronic and other navigation equipment on ships carrying pollutants
- prescribing types and maximum quantities of pollutants that may be carried on ships as cargo or fuel, and the method of stowage
- procedures for loading and unloading pollutants
- keeping of records regarding discharge as well as loading and unloading of pollutants.

The legwork in this legislation is carried on by a pollution prevention officer who may board and inspect ships to gain information. In pursuit of his mandates, he may order a ship to anchor or to follow a specified route on the reasonable and probable grounds that a spill might occur. He may also order other ships to aid in any necessary cleanups.

Liability under this legislation does not depend on proof of fault or negligence. However, it is an adequate defence to establish that the pollution occurred by virtue of an act of war or an exceptional, inevitable and irresistible natural phenomenon, or the negligent or intentional act of another. Subject to these exceptions, the owner of a ship carrying pollutants in excess of the prescribed quantity is liable for the expenses reasonably incurred in a clean up authorized by the Governor General in Council. If the Minister takes preventive action in this regard, these two owners are also jointly and severally liable in Admiralty court.

The posting of indemnity bonds by ships carrying loads of pollutants in Canadian waters is required. The purpose of these bonds is in order that aggrieved parties may recover, should damage result.

GARBAGE POLLUTION PREVENTION REGULATIONS

These regulations very simply regulate the discharge of garbage into Canadian waters. Garbage is described as a pollutant under the Shipping Act.

POLLUTANT SUBSTANCE REGULATIONS

These regulations specifically establish a list of substances prescribed to be pollutants. They then outline that discharges of such substances into Canadian waters are prohibited except for: a) life-saving situations, or the prevention of an immediate loss of a ship; or b) when a discharge is due to damage to or leakage from a ship as a result of stranding, collision or foundering, and all reasonable precautions have been taken to avoid and minimize such an event. In either case, the reporting of such discharges must be made.

3.4.10 The Indian Act

Bands appear to have the capacity to deal with non-navigable water resources within the bounds of Indian Reserves. These non-navigable water resources include sloughs, ponds, ditches, wells, reservoirs and locally owned and operated water supply and waste treatment and disposal systems.

Where Reserves have navigable waterways, Bands appear to own the streambanks, but not the water or the streambed.

Any discussion of Indian rights to water, and the role of The Indian Act is frought with legal uncertainties. Refer to Section 3.7.

3.5 PROVINCIAL LEGISLATION

3.5.1 Introduction

Provincial legislation may be roughly divided into statutes dealing with water quality and statutes dealing with water use. It is worthwhile to examine the applicable legislation bearing in mind these rather crude categories. In addition, although municipal powers are derived solely from the province, potential water management authority at this level of government is separate. It should be understood, however, that there is a good deal of overlap between the two levels and between legislation aimed at water use and water quality.

3.5.2 Water Corporation Act

The Water Corporation Act establishes a Crown Corporation with broad powers regarding the allocation, development and protection of the water and related land resources of Saskatchewan. This legally constituted Corporation acting as agent for the Crown may purchase, lease, or otherwise acquire real or personal property, including water rights and water powers, in order to pursue its mandate. The powers and purposes of the Corporation are extensive: the Corporation manages, administers, develops and controls water and related land resources in order to promote economical and efficient use, maintain water quality, and ensure water supply through control of construction of works and regulation of the flow of water within the Province. In addition, it is the responsibility of SaskWater to co-ordinate research and enter into agreements with other governments, boards or departments on issues relating to water. The articulated powers are not meant to be exhaustive and, indeed, the corporation may exercise any additional powers which it deems necessary, incidental or conducive to the performance of its mandate.

Part Three of the Act deals with water rights, and is of major importance to those concerned with management of the basin. The right to the use of all ground and surface water may only be established pursuant to the Water Corporation Act. It is the role of the Corporation to allocate the right to use of all such waters, excepting any waters that have already been allocated or waters which have been withdrawn from allocation, i.e., reserve waters. Underlying this right is the longstanding statutory claim in that "property in, and the right to the use of, all ground water and surface water is, and is deemed always to have been, vested in the Crown".

Rights which are granted by SaskWater may be of a temporary or permanent nature or subject to conditions. However, once the corporation has granted a permanent right, cancellation will follow only if there is: agreement by the licensee, violation of a condition, use of water for a purpose other than that for which it was acquired, or a determination by SaskWater that the person no longer requires his right.

Rights existing prior to the coming in force of the Water Corporation Act (for example, those established under the Water Rights Act) continue, although cancellation is possible with Cabinet approval if "the Corporation considers it to be in the public interest to do so"; the licensee is to be compensated for the value of any structures or works.

No person shall divert or use any surface waters, nor construct any work for the impounding of surface waters, without the authorization of the corporation. Riparian owners are specifically exempt from the requirement of authorization when the water use relates to domestic purposes on the land, but riparian owners are not entitled to impound or divert water by any works other than a dugout or pump unless authorized. Any violation of this provision will render an individual liable to civil action for damages to anyone who is "damnified" by reason of any such diversion, impounding or construction.

With the exception of agreements or undertakings in existence on April 1, 1931, no Crown grant can henceforth include property or interests in any water course. However, the Crown has the right pursuant to other legislation to dispose of minerals on, in, or under the bed of any body of water. Moreover, the Crown has the right pursuant to legislation to grant the holder of mineral claims the right to deposit tailings, slimes, or other mining waste into any water-beds or shores in one area designated as a tailing disposal area.

In essence, then, the general water rights powers of Part Three vest property in water to the Crown, set up a system for allocation of water rights and for approvals of works related to water rights, and establish that no vested right is acquired pursuant to any grant of property or right of diversion unless such rights were established prior to April of 1931. The remainder of Part Three of the Act deals with the power to construct, supply and administer waterworks. SaskWater may, of its own accord or through contract with any municipality, arrange for the construction and supply of water and water works. Insofar as administration is concerned, SaskWater is unequivocally responsible for the "general supervision control and regulation of all matters concerning works".

Individuals seeking approval for such works must file certain materials with their application. Of particular note is that any application for approval by SaskWater to construct, alter or operate works necessitates the consent of the Minister of Environment.

Individuals who claim to have suffered or anticipate they may suffer due to construction, extension, alteration, or operation of a work may file a written complaint with SaskWater. Upon investigation it is the role of SaskWater to hear the complaint and serve as adjudicator for the dispute. However, in pursuit of this mandate, SaskWater has no power to determine liability or to award compensation in respect of a complaint, although it may serve as a mediator between the parties.

With regard to liability, no proceeding of law lies against the corporation for any act done in good faith in the execution of its powers or functions, on for any alleged neglect or default in the execution in good faith of any powers or duties.

Approvals under this legislation in no way affect the application of other Acts or regulations which require approval or licensing.

For the purpose of carrying out the provisions of the Water Corporation Act, the Lieutenant Governor in Council is entitled to make regulations respecting any matter authorized by the Act or ancillary thereto. In pursuit of this mandate, the Minister responsible for SaskWater has adopted several sets of regulations. For the most part, these regulations were passed pursuant to repealed acts articulated in section 85 to 95 of the Water Corporation Act, but are now treated as if they were made under this Act. To briefly highlight these regulations and point out areas of particular note:

REGULATIONS FOR THE ADMINISTRATION OF THE WATER RIGHTS UNDER THE WATER RIGHTS ACT

These regulations which were passed under the Water Rights Act and remain in force under the Water Corporation Act set out how a person or corporation goes about getting a licence to divert water. Applicants must submit both general and detailed plans of the overall project and particular structures involved in the work. In addition, formal agreements which set out the terms of such approvals may be provided by the Minister, including agreements relating to such matters as monitoring flow at point of diversion, etc.

DRAINAGE CONTROL REGULATIONS

These regulations establish the procedures for obtaining a licence to set up drainage works. No permit is required in cases involving works existing pre-1981, works authorized by the Minister, or works which must be approved under specific listed "other" legislation, including the South Saskatchewan River Irrigation Act (subject to limitations). Detailed and general plans are required.

3.5.3 Water Appeals Board Act

The Water Appeals Board Act supports the Water Corporation Act by providing an administrative mechanism for appeal of all decisions of the Corporation relating to its water management mandate.

3.5.4 Provincial Lands Act

This legislation outlines the duties of the Minister in relation to Crown lands. It has a significant impact in terms of water rights in the sense that land includes all water and water courses.

Specifically exempt from this Act are lands administered by the Department of Parks and Renewable Resources pursuant to the Forestry Act.

The Lieutenant Governor in Council may transfer to any other department provincial lands required by that department for any purpose. The receiving department will then administer the lands under this Act, unless the Department is authorized to administer the lands under other legislation.

In every disposition of provincial lands under this or any other act, it is implied that all reservations provided for in this legislation or in the Crown Minerals Act, the Forestry Act, the Water Power Act, the Water Rights Act (repealed), or any other act. It is worthy of note, then, that section 12 of the Provincial Lands Act states that unless express provision is made to the contrary in the disposition, the bed of all water courses shall not pass to the person otherwise acquiring the land. There is a further reservation to the public of the right of access to such water courses, and of passing and repassing on or beside the lands either side of a watercourse wherever it is necessary for the use thereof.

The Crown reserves out of every disposition of provincial land the property in and the right to use of all water powers and land upon which there are water powers--complementing the Water Power Act. Indeed, this act states that water powers and lands shall be disposed of only in such a manner as are provided for in the Water Power Act and its regulations.

This does not affect the right of the Crown under the Mineral Resources Act to dispose of minerals in, on, or under lands forming the bed or shore; nor does it affect the right of the Crown to grant to any holder of a mineral claim the right to deposit tailings, slimes, or other waste products into any body of water, providing that area has been set aside as a tailings disposal area.

In reference to all these forms of disposition and their exceptions, of the Provincial Lands Act states that it will not be necessary to set out reservations in favour of the Crown in the case of all dispositions, but every disposition shall be read and construed and shall have effect as if all such reservations were expressly included.

The Lieutenant Governor in Council may set aside provincial lands for use as provincial parks, forest reserves, games reserves, bird sanctuaries, public resorts, sites for wharves or piers, harbours, landings, and bridge sites. Land reclaimed by virtue of drainage and reclamation of swampland may be granted to any individual engaged in reclamation. If the lands transferred exceed an area equal to four townships, ratification and confirmation by the legislature is required.

The Lieutenant Governor in Council may transfer to the Government of Canada upon such terms and conditions as he sees fit and are mutually agreed upon, provincial lands that are required for any project under the authority of the Prairie Farm Rehabilitation Act.

The Lieutenant Governor in Council may, in agreement with the appropriate authorities, set aside out of unoccupied provincial lands, the lands necessary to enable Canada to fulfil its treaty obligation with the Indians of the province. Setting aside of this property is not deemed to be a disposition under this Act or any other act that restricts or prohibits disposition of land, or makes any disposition of provincial lands subject to a reservation in favour of the Crown. The property in and the right to the use of all water and water powers in that land, and any other property interests, rights and privileges that the Lieutenant Governor in Council may specify, are reserved to the Crown.

As an overriding power the Lieutenant Governor in Council may make orders and regulations which are not inconsistent with this Act in order to carry out its provisions or to carry out an agreement of transfer, or to meet cases that may arise for which there are no provisions made in the Act. Furthermore, he may on grounds of compassion or justice in any special case waive the regulations of the Dominion Lands Act and the regulations thereunder.

The Minister is empowered to control, manage, sell, lease, or otherwise dispose of provincial lands. The Minister may also set aside and reserve from disposition any lands which are unsuitable for cultivation without the aid of irrigation, which are needed for irrigation or a drainage system, marshlands, lands needed for water storage, lands valuable for protection of ponds, lakes, or other water supplies, or for water power, harbours, or landings. When the Minister is satisfied that the necessity for this reservation no longer continues, such reservation may be removed.

For any provincial lands which are required for a higher public use, or which because of their fragile nature require protection, approval of the Lieutenant Governor in Council is needed before selling.

While lands remain within the control of the Minister, he may place, construct, or bring onto the property improvements, structures, or works deemed necessary or desirable for the efficient development or use of the lands or other lands in the vicinity. Similarly, the Minister may authorize the use of provincial lands in connection with any project undertaken by or on behalf of any department of the Government of Saskatchewan.

Where any leased provincial lands would benefit from the construction of works, as defined in the Irrigation Districts Act, pursuant to an act of the Parliament of Canada or the Saskatchewan Legislature, the lessee may be required to develop the land for irrigation and to make proper use of the water allocated for irrigation of the lands. Consequent to such use, the Minister may require the lessee to pay all charges, fees, rates, and assessments that may become due in respect of the construction, operation, or maintenance of such works, and in respect of the water allocated or used. Failure on the part of the lessee to comply with construction requirements can result in cancellation of the lease by the Minister, once proper notice has been given.

RESOURCE LANDS REGULATIONS

Pursuant to these regulations, provincial lands administered as resource lands by the Department of Parks and Renewable Resources may be disposed of by way of sales, lease or permit. The regulations somewhat clarify the reservations section of the governing act by stating that any portion of land described in a lease which is situated on a waterbody is subject to a reservation for public use of a strip of land adjacent to the shoreline, 31 meters in width measured perpendicularly from and along the bank of the waterbody. The Minister may, by specific clause in the lease, increase or reduce the width of this strip so reserved.

The only other matter of particular note is that no island is to be sold until designated for sale and fully described by the Minister's order in the Saskatchewan Gazette.

3.5.5 Parks Act

This legislation addresses the establishment, maintenance, and use of parks and parklands within the province. Included within its ambit are provincial parks, protected areas, recreation sites, and historic sites which are reserved for the enjoyment and education of the people of Saskatchewan, visitors to the province, and for the benefit of future generations.

Once established, parkland cannot be granted nor transferred, but the Minister may make other dispositions as long as a strip of parkland 10 metres in width adjacent to any river or water bank is retained within the park.

Any disposition of parkland is subject to reservations of:

- the property in and right to use of all water in rivers and watercourses and to the land forming the bed and bank
- the right to use all water power and lands on or in which there is water power, or which is required for the protection of water power or for undertakings
- the right to develop and maintain irrigation works

The Lieutenant Governor in Council may make regulations for the protection, care, management, and improvement of parklands subject to the Water Corporation Act, any federal act regarding use, enjoyment and activities on the water within or adjacent to the parklands, all federal acts regarding mooring and docking of water vessels, and the Environmental Management and Protection Act.

3.5.6 Watershed Associations Act

Pursuant to this legislation, two or more agencies with a common interest in the use or protection of a body of water may apply to establish a Watershed Association. The Association may then raise funds and undertake projects in relation to this water.

An agency is defined in the legislation to include a municipal or county council, Corporation Board, Irrigation District Board, Conservation and Development Authority, and a Board of Directors of the Water Users Association. Also noteworthy, is the fact that "project" is defined as any works proposed or developed under the Water Corporation Act, Water Rights Act or any other Act providing for the improvement, development, utilization or control of water or land resources.

The constituting agencies appoint members to a Board of Directors who manage the affairs of the Watershed Association. The powers of this Board are articulated in the Act:

> "An Association may undertake, plan, construct, alter, improve, maintain, repair, or operate projects in which the agencies have a common interest."

The underlying purposes for such activities, however, must be tied to storing, conserving, using, controlling, protecting, or developing the water or water resources available to the Association.

Noteworthy in terms of water management hierarchy, the powers of the Board do not include water control works that are under the direction or control of the Government of Canada or Saskatchewan or any other entity, unless responsibility for the works has been assumed by the Board pursuant to a written agreement.

3.5.7 South Saskatchewan River Irrigation Act

This legislation followed the agreement between the Government of Saskatchewan and the Government of Canada dated July 25, 1958, with respect to construction of the dam located on the South Saskatchewan River near the town of Outlook (the Gardiner Dam). This legislation reflects Saskatchewan's side of the bargain. Saskatchewan agreed to complete construction of irrigation works to the extent necessary to provide full irrigation to not less than 50 000 acres of land.

Pursuant to the legislation, the Lieutenant Governor in Council established an irrigation District for the use of project waters.

The powers of the District Board are subject to regulations and to the Water Corporation Act. The Board can enter into agreements for construction, operation, and maintenance of irrigation works, and bulk supply of water. The Board, subject to ministerial approval, may also make regulations and by-laws necessary to ensure equitable distribution of water, disposal of surplus, and cutting off of water supply to a parcel of land.

Once the Board has established water rates and assessed the cost to individual users on the basis of a "per acre of land to be irrigated" calculation, water rates accruing on a specific piece of property shall be a special lien upon the land, having priority over all claims or encumbrances.

The Minister may delegate to SaskWater any of his powers, duties or functions under the South Saskatchewan Irrigation Act.

3.5.8 Irrigation Districts Act

This legislation provides for the establishment and continuance of Irrigation Districts. The process begins with a petition signed by a majority of the owners of land who collectively own one-half of the area of the lands in the proposed District. After publication of the application and review of objections to the establishment of the District, provided the objections are not substantial, the Minister must appoint a returning officer.

An election of a Board of Trustees follows. This body corporate, subject to the Water Corporation Act, has the power to acquire, hold and alienate water rights as well as real and personal property. In addition, it enjoys all powers necessary for the construction, working, maintenance and renewal of irrigation and drainage works necessary for the purposes of the District.

After the formation of a District, the Board may apply to SaskWater under the Water Corporation Act for an allocation of water necessary for the irrigation of the District or any portion thereof, and for the authority necessary to construct works for the utilization of such water. Alternatively, or in addition, the Board may, subject to local government Board approval, enter into contracts for the construction of works and/or the supply or sale of water.

Subject to the Water Corporation Act, the Board of Trustees shall have and possess all powers necessary in order to enable it to construct and maintain works, and may make regulations regarding the supply of water to any person, and for the disposal or supply of any surplus water that is not required for the purposes of the District.

3.5.9 Conservation and Development Act

The Conservation and Development Act is designed to authorize works necessary to conserve and develop agricultural resources, including land and water resources, of the province. The Minister has discretion to establish conservation and development areas, whether prompted by petition or on his own violation. As with the Irrigation Districts Act, if two-thirds of the land owners within the proposed area petition the Minister to form a District he may consider the request. His decision will be based on whether or not the lands therein are being, or could be, benefitted by additional works. In designating a conservation and development area, the Minister may include lands which fall within a Drainage District or Water Users District.

The role for SaskWater within the Conservation and Development Act is considerable. If SaskWater is of the opinion that any works are necessary to save, conserve, or develop any land or water resource within an area, SaskWater may construct works or enter into an agreement with the Government of Canada or any person for the construction of such work. On the other hand, if the area authority is of the opinion that such works are necessary, it may pass a resolution authorizing such construction, but must itself seek the approval for construction, maintenance or operation from SaskWater. The Conservation and Development Act makes an attempt to bring works already in existence within its scope: that is, all works that are deemed by the Minister to have been established in order to "save and conserve and develop agricultural resources" may continue under the legislation. The limitation upon this is that works within a Drainage District or Water Users District are not subsumed, unless the Conservation and Development Area Authority establishes an agreement in writing with the District organization affected that it will assume responsibility for the continuation of the works.

3.5.10 Water Users Act

This legislation enables three or more ratepayers to petition the Minister for the establishment of a Water Users' District consisting of any portion or number of rural municipalities. On receipt of such a petition, the Minister may by order make such inquiry as is deemed expedient, and then may proceed to define and establish a District in accordance with the petition. The Minister has total discretion in establishing the District.

All works constructed by a Water Users' Association are appurtenant to the lands of the members in proportion to their respective interests in the Association. Although works are appurtenant to the lands of individual members, the inter-relatedness of such projects is specifically recognized in the responsibility of the Association as a whole for the maintenance and repair of works within a Water Users' District. The Association may apply in the name and for the benefit of any or all members for rights to use water pursuant to the Water Corporation Act. It may then take the necessary steps to equitably distribute the water to the members, and to construct such works as it deems expedient to pursue such ends.

Additional powers include the right to:

- enter contracts for supply or purchase of water from works outside the District, and to distribute the water within the District
- purchase machinery and equipment, with Ministerial approval
- erect dikes to prevent land inundation from overflow
- hold water for irrigation subject again to Ministerial approval
- operate works to improve land drainage
- purchase or expropriate land, pursuant to appropriate legislation and subject to Ministerial approval (section 10)

Each Association, subject to Ministerial approval, may establish its own by-laws in order to determine its manner of operation and to establish means of equitable apportionment of water allotted to or otherwise made available to the District. It may also assess members for expenses incurred in relation to the irrigation of land.

An Association may, at a general meeting, authorize its Board to enter into an agreement with an owner of land who has already obtained a licence to mingle his waters with the waters conveyed to the Association and to construct works for such mingling.

The interest of each member in an Association is based on the quantity of water which he is licensed to divert from the works in proportion to the aggregate total available in the District. As an alternate means of assessment, and subject to the approval of the Minister, the members of the Association may decide by vote that respective interests shall be proportionate to the areas of land irrigated by means of the work.

3.5.11 Water Power Act

This legislation assigns the property in and right to use all provincial water powers to SaskWater, with the exception of any rights granted before April 1, 1931.

Water power is defined as any "force or energy of whatever form or nature contained in or capable of being produced or generated from any flowing or falling water in such quantity as to make it of commercial value". Undertaking is defined as including the storage, pondage, penning back, regulation, augmentation, carriage, diversion, generation, and use of any water or the flow thereof, designed for the purposes of development, transmission, distribution, or utilization of the force of energy produced from such water power.

The Act applies to all provincial water powers, provincial lands used in connection with water powers, and energy produced.

All provincial lands which are essential to water power, or are required for the purposes of an undertaking, are not open to sale; nor shall any interest be granted therein except in pursuance of this Act. Moreover, any interest so granted shall not vest any exclusive or other property interest with respect to the lands or water powers thereon. In the case of larger projects, i.e., an interest in water power capable of developing more than 12 500 continuous horsepower--approval of any grant shall require ratification of the legislature. This does not apply to any interests granted prior to April 1, 1944 by the Crown to water power licensees.

Implied in every grant is the condition that no power generated in Saskatchewan from any provincial water power shall be exported across the international border.

For the purpose of this legislation, land may be expropriated by SaskWater in accordance with its own legislation, and the right of expropriation extends to pre-1931 undertakings licenses by the Minister of Interior under the Dominion Water Power Act, if the licensee had the right of expropriation at that time.

Water Power Regulations

These regulations are concerned with specifics of obtaining a licence to establish a water power undertaking. Specific detail is required in the application for a licence to divert or store water for water power purposes and both publication and hearing will follow submission of such an application. If approved, various alternatives are available in the form of priority permits, interim licenses or licenses (not exceeding 50 years).

A licence provides only limited rights in the land. Lands forming part of the bed of any stream required for the site of the works shall be set out separately in the interim or final licence but shall convey no exclusive right to the bed. Indeed, the province may grant additional privileges to any individual in relation to the use and occupation of these beds, provided that the rights of the original licensee are not substantially interfered with. The licensee must be given an opportunity to respond to such additional requests.

If the Minister believes that rights under the Water Rights Act (now within the Water Corporation Act) conflict with and are more in the public interest than rights under these regulations, the Lieutenant Governor in Council can terminate a licence with twelve months' notice. The licensee will be entitled to compensation. Notwithstanding rights granted by licence, any licensee must comply with the Navigable Waters Protection Act (Canada) and with provisions of any provincial or federal Statutes regarding preservation of the purity of water, logging, forestry, fishing, or other interests.

3.5.12 Power Corporation Act

The stated purpose of this legislation is to control the generation, production and sale of electricity, steam and gas produced in the province. It is under the auspices of this legislation that SaskPower was created.

The purposes and powers of the Corporation include the generation, transmission, distribution, sale and supply of electrical energy, and the production, transmission, distribution, sale and supply of steam. In pursuit of this mandate, the Corporation may acquire by purchase, lease or otherwise any property, including water rights and water powers, that it considers necessary or desirable for the efficient operation of a business.

3.5.13 Public Works Act

Subject to the provisions of the Water Corporation Act, all lands, streams, water courses and properties required for the use of public works and heretofore acquired for public works, which are not under the control of the Government of Canada, are vested in the Provincial Crown. In addition, other works may be declared public works with the exception of any property, buildings, or things owned or operated by SaskWater.

In administering public works, the Minister may make orders and regulations with regard to:

- preservation and management of any lands or properties
- protection of animal and vegetable life
- operation and use of public works, including water supply and sewage works
- regulation of recreational activities
- preservation of public health and spread of disease (subject to the Water Corporation Act)
- control of the use and prevention of pollution or contaminants or other injuries to water
- prevention and abatement of nuisances.

As a final reference to water management, the Minister may expropriate lands and may "divert or alter, temporarily or permanently, the course of any brook [or] rivulet" in order to protect a public work if proper.

3.5.14 Ecological Reserves Act

The intent of this legislation is to preserve designated Crown lands in order to sustain a unique or representative part of the natural environment. Natural environment in this case includes water, and thus, this statute may have some impact on water management.

The Lieutenant Governor in Council may make regulations and orders designating Crown land as an ecological reserve and outlining those activities which may take place within the reserve. No designation of land as an ecological reserve may be revoked except by the Legislative Assembly.

Subject to regulations no ecological reserve nor any right, title, interest, or estate in the reserve land is to be granted under the provisions of any other Act or law of the province. Where there is a conflict between the provisions of this legislation and any other Act, the provisions under this Act will prevail. To date there have been no regulations passed pursuant to this legislation.

3.5.15 Critical Wildlife Habitat Protection Act

This legislation is designed for the protection and management of Crown lands critical to the maintenance of wildlife populations. In many respects, the provisions are similar to the Ecological Reserves Act. The Lieutenant Governor in Council may designate any Crown lands as a critical wildlife habitat. Critical wildlife habitat lands are administered in accordance with the Provincial Lands Act; however, no grant or transfer of critical wildlife habitat lands is possible. The only exception to this prohibition is a disposition, authorized by the Minister or by regulation, in accordance with any described terms or procedures. As well, disposition may occur pursuant to the Mineral Resources Act.

Similarly, no alteration of critical wildlife habitat lands is permitted unless authorized by the Minister.

Finally, this Act and regulations are to prevail over other legislation should a conflict arise.

CRITICAL WILDLIFE HABITAT DISPOSITION AND ALTERATION REGULATIONS

In addition to designating particular critical wildlife habitat lands, these regulations outline the permitted limited dispositions, including oil and gas exploration and extraction, raising of livestock, haying, and cultivation.

3.5.16 Meewasin Valley Authority Act

The Meewasin Valley Authority Act establishes a corporate body to control development of designated Authority lands The participating parties in the Authority are the city of Saskatoon, the Government of Saskatchewan, and the University of Saskatchewan.

The Meewasin Valley Authority includes the shores and lands in and under the waters of the South Saskatchewan River bounded on the north by a projection eastward of the north boundary of section 10 in township 40, in range 3, west of the third meridian and on the south by the projection eastward of the south boundary of that portion of section 4 in townships 35 and 34, in range 6, west of the third meridian, lying west of the river.

Meewasin Valley Authority may co-ordinate the use of all public lands within their jurisdiction in accordance with their development plan. Following on this, it may make by-laws regarding:

- the prohibition or regulation of the use of waters for recreational purposes
- authorization the police to remove boats in the valley in contravention of the Act
- protection of animal, bird, aquatic, and plant life
- subject to any Act of Canada or Saskatchewan, deal with the control, use and prevention of pollution or contamination or other injury to the waters and banks of any body of water
- prevention of nuisances and compel abatement of nuisances

Throughout the Act are references to the necessity for gaining approval for development within the lands governed by the Authority. The Authority may delegate powers regarding granting of approval to the city or the University, depending on where the land is located.

Where a member of the Executive Council or other person is authorized to grant any licence, permit, approval, etc. under the Pollution (by Livestock) Control Act, the Water Power Act, the Environmental Management and Protection Act or the Water Corporation Act (or any regulations of these) and the land falls within the ambit of the Meewasin Valley Authority, approval of the Authority to the granting shall be obtained by the applicant. Where the provisions of the Meewasin Valley Act conflict with any other legislation, the provisions of this Act (or any by-law enacted pursuant to this Act) will prevail. The only exception to this is the exercise of academic powers under the University of Saskatchewan Act.

3.5.17 University of Saskatchewan Act

This legislation provides that real property vested in the University may not be entered, used or taken by any municipality or other corporation or by any person for any purpose whatever. No power to expropriate real property conferred after 1973 shall extend to University property unless the Act conferring the power expressly states so. The exception to this would be the Meewasin Valley Authority Act, wherein expropriation of land of the participating party (which includes the University) is permitted.

3.5.18 Department of Agriculture Act

The Department of Agriculture Act establishes a revolving fund to provide conservation and development services to Water Users Associations, Watershed Associations, Irrigation District Corporations, Conservation and Development Area Authorities, and municipalities.

3.5.19 Fisheries Act

Pursuant to the provincial Fisheries Act, the Lieutenant Governor in Council may make regulations regarding the inspection of waters and the classification of the quality of fish therein.

3.5.20 Heritage Property Act

The Minister may purchase, lease or otherwise acquire property to be designated as a heritage property by the province or by a municipality. Notwithstanding any other Act, no one can destroy, alter, or change real property fixtures which have been designated under this legislation.

3.5.21 Pollution (by Livestock) Control Act

This Act governs the regulation of large scale livestock operations in the province. The Minister will not issue a permit for intensive livestock operations unless the pollution of ground water or surface water will not occur as a result. If an operation is unsanitary, is a nuisance, or if lands or waters are in danger of being polluted, the Minister may, on the recommendation of an inspector, order anything necessary to remedy, abate or discontinue the problem. The Act further provides for a maximum penalty of $5 000 for violation of its provisions and $100 per day that the offence continues.

3.5.22 Environmental Assessment Act

This Act is of primary import in terms of development of water and resources within the Province of Saskatchewan. It outlines the powers and duties of the Minister when a development which may substantially alter the environment is being planned or proposed.

Definitions of pollution and contamination are broader in the Environmental Assessment Act than in the Environmental Management and Protection Act, and highlight the Environmental Assessment Branch's broader scope of interests.

The legislation widely defines development in as any project, operation, activity, or alteration or expansion of a project, operation or activity which is likely to:

- i) have an effect on any unique, rare or endangered feature of the environment
- ii) substantially utilize any provincial resource and in so doing pre-empt the use, or potential use, of that resource for any other purpose
- iii) cause the emission of any pollutants or create by-products, residue or waste products which require handling and disposal in a manner that is not regulated by any other Act or regulation
- iv) cause widespread public concern because of potential environmental changes
- v) involve a new technology that is concerned with resource utilization and that may induce significant environmental change, or
- vi) have a significant impact on the environment or necessitate a further development which is likely to have a significant impact on the environment

Notwithstanding any other Act, regulation or by-law, a proponent must get ministerial approval before proceeding with any development. Where a conflict exists between a condition of any other licence, permit, approval, etc., granted under any other Act, regulation or by-law and a condition of ministerial approval, the conditions pursuant to this legislation prevail. The only exception to this requirement for ministerial approval occurs in a case where in the Lieutenant Governor in Council's opinion there is an emergency. At that point, the Cabinet may exempt any development or any class of developments from the application of this legislation.

The Minister may conduct research studies and disseminate information with respect to environmental assessments and may appoint committees, make examinations, tests, and other arrangements as necessary.

It is the proponent of the development who must provide an Environmental Impact Statement for the Minister. It is explicitly stated that all costs are to be borne by the proponent. The Minister shall then give notice that an assessment is underway. This notice is pursuant to regulations, which are not yet in existence.

Upon receipt of the Environmental Impact Statement, the Minister must prepare a review of the statement and then make the statement available to the public. He may, prescribe any conditions regarding public inspection that he considers appropriate. Written submissions are invited, and the Minister may or may not hold public meetings or public hearings as he deems fit. At the conclusion of such a review or public inquiry, the Minister may approve the project, deny the go-ahead to the project, or impose terms and conditions on an approval to proceed.

If there is any change in the development that does not conform to the terms or conditions of the Minister's original approval, the proponent must so inform the Minister before proceeding with the changes. Once again the Minister may change or alter his approval.

Any proponent is civilly liable to those suffering loss if the development proceeds without ministerial approval; in this circumstance, the burden of proof will remain on the developer.

3.5.23 Environmental Management and Protection Act

This Act is the primary legislation regarding pollution control in the Province of Saskatchewan. Although it is intended to address problems related to air, water, and land-based pollution, it is heavily oriented to water quality management. Within the definition section of legislation, two important terms must be noted. First, pollutant is defined as any substance that causes or may cause environmental pollution. Second, pollution includes the alteration of physical, chemical, biological, or aesthetic properties of the environment, including the addition or removal of any substance that will render the environment harmful to the public health, is unsafe or harmful for domestic, municipal, industrial, agricultural, recreational, or other lawful uses of the environment, or is harmful to wild animals, birds or aquatic life.

Part I of the legislation deals with unauthorized discharges into the environment. Subject to any licence, permit or privilege granted under this Act or its regulations, or any other Act or regulations administered by the Minister, when a pollutant is present or has been discharged by accident or otherwise into the environment, the Minister may order the owner or the person responsible to take any necessary measures to protect or restore the environment. The measures contemplated by the Minister under this section of the Act vary from investigation; to monitoring; to restoration of the affected area to a condition satisfactory to the Minister. The Minister may take these actions unilaterally if the actors cannot be identified or located, or if the public interest demands immediate response. The Minister may then seek compensation from the responsible party. In imposing an order, the Minister may set a time limit for compliance, and if it is found that the polluter has failed to comply, the Minister may carry out the order or enter into agreements to carry out the order, and recover the costs from the named person. There is a provision within the Act for a person aggrieved by an order of the Minister to appeal to the Queen's Bench within 30 days of the issuance of the order; however, any such appeal does not stay the operation of the order with respect to which the appeal is taken.

From the perspective of the individual who has suffered loss or damage to his person or property or pecuniary loss (including loss of income), the Act provides for civil liability. Individuals, including the Crown in the right of Saskatchewan or Canada, have the right to seek compensation from the owner of the pollutant for damages which have been incurred as a result of; the discharge of the pollutant, a default in the execution of a duty to report imposed by the Minister, or an investigation undertaken by the Minister. There is no necessity on the part of the plaintiff to establish fault, negligence or wilful intent. Liability will follow unless the owner of the pollutant or the person having control of the pollutant is able to establish that all reasonable steps to prevent the discharge, or the discharge was caused wholly by an act of another or by an exceptional natural phenomenon. A plaintiff may commence action up to 6 years after he knew or ought to have known of the damage.

Further, the legislation specifically deals with water pollution control, industrial effluent works, sewage works and water works. In general, the Minister is charged with supervision, control and regulation of all matters concerning water quality and its impairment by pollution. Pursuant to this mandate, it is within his powers to consult and conduct research in tandem with SaskWater or the Prairie Provinces Water Board. He may also inspect works and order construction of works considered necessary to protect public health or abate or prevent pollution. In this regard, the Minister may draw upon health officers of the municipality for consultation regarding public health relating to water and sewage.

Throughout the description of the Minister's duties, it is evident that a high degree of cooperation between other provincial, federal, and municipal authorities is deemed advisable, if not required. Moreover, the Department, insofar as the public is concerned, shall make as much information as practicable relating to water quality resources in Saskatchewan available to the public and to any private agency.

No one shall discharge, without a permit, contaminants which might reasonably cause a change in water quality or water pollution. The construction, installation, alteration, extension, or operation of any industrial effluent works requires a valid and subsisting permit. Exceptions to this permit requirement are articulated; in particular, industrial effluent works that discharge industrial wastes exclusively into the sewage works operated by the municipality, and any discharge, deposit, drainage or release that is exempted in the regulations. In addition, persons may discharge, deposit or release contaminants to poison, kill or otherwise control weeds or other organisms into surface water only in locations which are wholly within the boundaries of their land, and do not flow directly or indirectly other than by percolation into other surface waters; otherwise, a permit is necessary. Finally, the restrictions do not apply to the maintenance of industrial effluent works.

Where the Minister considers it appropriate, he may waive the requirement to obtain a permit. No criteria as to what constitutes an appropriate situation is articulated.

Having established the prohibition and exceptions thereto, the Act then proceeds to outline the steps necessary to gain a permit. Notwithstanding permits, the Minister may have issued pursuant to this legislation or any other approval under the Water Corporation Act or its predecessors, the Minister may by order direct the owner or operator of any sewage works or water works to cease or suspend the operation of the works or in any way alter or extend (including construction and installation of works) the sewage or water works. The Minister may take it upon him to fulfil the requirements specified, should the person to whom an order has been made fail to do so.

The Act vests extensive powers in the Lieutenant Governor in Council to make regulations. These include:

- standards regarding water quality
- permit application requirements
- standards for industrial effluent works, sewage works and water works
- sale, use, application and disposal of chemicals

- holding and disposal of waste substances capable of causing water pollution from water craft
- mining industry waste
- defining and regulating of hazardous substances and wastes

The all-encompassing nature of the Environmental Management and Protection Act is evident. Notwithstanding this or any other Act, any licence, permit or other authority for the discharge of waste into the environment is invalid unless issued pursuant to this legislation, or if used prior to the passage of this legislation, unless it has received approval of the Minister. It is noteworthy that the Lieutenant Governor in Council may by regulation exempt a class from the application of this subsection, but this has not been done pursuant to legislation.

WATER POLLUTION CONTROL AND WATER WORKS REGULATIONS

The most important regulations dealing with environmental management and protection as they relate to water management are the Water Pollution Control and Water Works Regulations passed in June of 1987.

"Excluded from these regulations are works that handle industrial wastes from mining, works related to sludge disposal, works that handle wastes designated by separate regulation as hazardous, and works that handle contaminants, industrial waste, or sewage at a refuse disposal site. The above works are regulated under other existing or pending regulations administered by Saskatchewan Environment and Public Safety."

"The regulations also exempt certain works and the discharge of certain contaminants that are regulated by other provincial government agencies. Examples include non-municipal sewage works with a capacity of less than 18 cubic metres per day, disposal of wastes from oil or gas well operation or development, intensive livestock operations, and drainage from agricultural land."

What follows in the regulations are application procedures for a permit to operate a work. Included in the regulations are such details as engineering and drawing of plans for the operation and construction of the work itself, and particular details with regard to methods of treatment. Sewage works and industrial effluent works are the subject of particular attention within the regulations, and detailed requirements are set out regarding sewers, pumping stations, treatment facilities, disinfecting and testing.

In Part Three of the Regulations, water work specifications are addressed in terms of supply specifications, potable water storage reserves, water treatment, operation of water works, and, once again, testing and records.

In Part Four, an Operator Certification Board is established to review and report on the training programme for operators of sewage works, industrial effluent works or water works. Similarly, this Board may review any matter relating to the training or certification of operators for such works and report its recommendations to the Minister as required.

ENVIRONMENTAL SPILL CONTROL REGULATIONS

Under these regulations, a spill does not include the intentional, lawful and prudent use of a pollutant for a purpose and in a manner generally recognized and accepted as ordinary and normal. Nor does it apply to oil and natural gas spills in connection with well construction or operation.

The regulations provide that the person having control of a pollutant must contact Saskatchewan Environment and Public Safety, the property owners, and the owner of the pollutant as soon as possible after a spill. Details regarding contents of the report to Environment are specifically outlined in the regulations. Immediately after a spill, the person having control of the pollutant and the owner of the pollutant must take all reasonable action, having regard to the safety of the public and themselves, to prevent further discharge of the pollutant, to contain the spilled pollutant, to minimize the effects, and to restore the affected area and the environment as nearly as possible to its condition immediately prior to the spill (section 8). The spilled pollutant and any substance affected by the spilled pollutant may then be disposed of in accordance with instructions given by the Minister of Environment.

As a final comment on the Environmental Management and Protection Act, Sections 32 and 33 of the Act pertain to the establishment of Reservoir Development Areas. These sections of the Act were transferred to SaskWater in 1987. The Lieutenant Governor in Council may, make regulations designating an area surrounding a reservoir as a reservoir development area. Such a designation will be made in order to ensure the most efficient use of the water within the reservoir, provide safe and efficient operation of the reservoir, reduce topographical damage, and ensure safe and orderly use of the lands for recreational and other purposes.

The Lieutenant Governor may also designate an area adjacent to a water course or a standing body of water as a special flood hazard area if necessary for the protection of life, health, and in the public interest to do so. Other considerations should be to prevent uses of land inconsistent with increased flood levels, while minimizing public expenses regarding floods by protecting property owners.

In creating a reservoir development or flood hazard area, the Minister may establish or eliminate a land use District in order to specify and limit use. Extensive land use control powers which are also within the Minister's purview in any Reservoir Development Area or special flood hazard area, and include the standardization of buildings, subdivision of lands and maintenance of property.

Also, the Minister may make regulations respecting protection of the habitat of wild animals and birds, including the creation of waterfowl sanctuaries, and of forested or improved lands in any reservoir development area or special flood hazard area.

Any efforts of the Minister regarding land use control in a reservoir development or flood hazard area require consultation with the council of any municipality either fully or partly within the area. The regulations must then be submitted to the Lieutenant Governor in Council for approval. Any individuals feeling aggrieved by virtue of such regulations may appeal to the Provincial Planning Appeals Board, provided the grounds for appeal contend that regulations have been misapplied to their property, or that compliance with the regulations would involve practical difficulties or unnecessary hardships by virtue of the topographical features of their site. Similar rights of appeal are available to affected councils of municipalities for misapplication of regulations, incompatibility of regulations with existing development in the community, or incompatibility with future development aims. Barring these exceptions, property is deemed not to be injuriously affected by regulations made pursuant to this section.

3.6 MUNICIPAL POWERS

3.6.1 Introduction

Municipal powers in water management may be exercised only as a result of enabling Provincial Legislation; that is, constitutionally municipalities lie within provincial control.

3.6.2 Public Health Act

The Public Health Act is of significant historical import in terms of water management. Most of its powers with regard to water resource management were transferred to Saskatchewan Environment and Public Safety when that department was created. Medical health officers may inspect water works and sewage works within their jurisdictions to determine the quality of water from the works. If necessary, the Minister may take steps to alleviate the danger, should he consider the water quality at the water or sewage works a danger to the public health. The Minister may, subject to the approval of the Lieutenant Governor in Council, make rules and regulations for the public health in relation to the construction and maintenance of water supply systems as they relate to the efficiency and purity of supply, and regulations regarding the construction, maintenance, cleansing, and disinfecting of drains, sewers, and sewage disposal systems.

SHORELAND POLLUTION CONTROL REGULATIONS

Shoreline development areas are areas of land within 1 500 feet of the high water mark of a waterbody in urban municipalities, summer resorts or recreation areas, and reservoir development areas. These regulations specifically outline the permissible sewage disposal systems at various distances from the high-water mark in these areas. Additional provisos are included for public use areas involving recreation or commerce.

3.6.3 Urban Municipalities Act

A number of particular sections within the Urban Municipalities Act address questions of water management.

Subject to the Public Health Act and any other Act affecting public health, City Council may make by-laws for the health and prevention of the spread of communicable disease, including the prohibition or regulation of bathing or washing in public waters in an urban municipality.

Subject to the Environmental Management and Protection Act, Council may provide for collection, removal or disposal of solid wastes and other refuse by by-law. In so doing, they may establish waste disposal systems, and prohibit or control the placing of refuse in streets or water courses and compel removal of such refuse.

Subject to the Water Corporation Act, Council may make by-laws controlling the use of water supply, providing water supply, regulating its use, and preventing the contamination of any stream or water flowing through or past an urban municipality. Council may establish works for the supply, collection, treatment, storage, and distribution of water, and for the collection transmission, treatment and disposal of sewage or storm drainage. A municipality can expropriate land for such services, and can purchase or lease waters necessary for such purposes.

Council may, subject to the Water Corporation Act but notwithstanding any other Act or agreement, make by-laws as follows (paraphrased):

- preventing or regulating discharge into drains or sewage systems operated by the municipality of any harmful liquid or solid that would be injurious to health, life, or property or that would injure, pollute, or damage any stream, sewer, etc.
- regulating any preliminary treatment of deleterious liquids or solids before discharge into municipal sewers.
- compelling owners or occupants of land or buildings to construct and maintain any works Council considers necessary for the proper treatment of sewage before discharge into the municipal systems.

Penalties for violation of any by-laws include the discontinuance of service and a maximum of $5 000 fine.

3.6.4 Rural Municipalities Act

Rural municipalities may make by-laws subject to the Water Corporation Act which parallel those in the Urban Municipalities Act . Moreover, rural municipal councils may make grants to the installer of the sewer or water systems for residents of a hamlet, provide for and regulate supply of waters to the municipalities, and enter into contracts with SaskPower for the installation of electrical generating plants or power distribution systems.

Subject to the Environmental Management and Protection Act, a rural municipality may regulate waste disposal sites, and may provide for the cleaning up of the foreshore of any lake (no reference to rivers) within the municipality by removing rocks, stones, refuse and weeds, and constructing pathways, even if the municipality does not own the foreshore. This right may only be exercised subject to the rights of the owner of the property.

3.6.5 The Rural Development Act

This act does not directly address questions pertaining to water management. It would however, have some application in instances where economic developments were undertaken that involved water management. Such developments might include tourism-based, water-enhanced recreational opportunities (e.g. marinas, parks, etc.). The Act states that a municipality may enter into agreements with other municipalities and/or persons for the purpose of securing the incorporation of a corporation. The objects and purposes of such a corporation are:

a) the identification of economic and social development opportunities and the preparation and amendment of an economic and social development strategy or plan for the parties to the agreement;

b) the establishment and maintenance of communications with the Government of Canada and the Government of Saskatchewan, and agencies of those governments, to become aware of and utilize programs of those governments and agencies that promote economic and social development in rural areas of Saskatchewan;

c) the establishment and maintenance of communications with municipalities and other persons respecting economic and social development in rural areas of Saskatchewan;

d) the formulation and carrying out of economic and social programs that benefit persons residing in rural areas of Saskatchewan;

e) any other objects or purposes relating to economic and social development in the rural areas of Saskatchewan that may be prescribed in regulations.

This Act establishes the department responsible for development in rural municipalities. In pursuit of its mandate, the department may carry out joint ventures with Federal and Provincial departments or a "council" (as defined in the Act to include Watershed Associations and Conservation and Developments Authorities). Development activities include construction and maintenance of bridges and roads on an Indian Reserve (with the consent of the Minister of Indian and Northern Development and the Council of the Band) and, subject to the Highways and Transportation Act, the establishment, operation, control and maintenance of ferry services.

3.6.6 Sewage Drainage Inquiries Act

This legislation was passed to enable investigation into damage resulting from the use, maintenance and operation of municipal sewage works. However, this legislation does not apply to any damage caused by the underground portion of sewage works.

Provisions in the Act enable the establishment of a commission of inquiry into complaints against the municipality. After investigation, the commission makes a recommendation to the Minister, and it is only at this time that a plaintiff may commence an action for damages against a municipality.

3.6.7 Planning and Development Act

The Planning and Development Act, a "public work" includes facilities for the storage, transmission, treatment, distribution, or supply of water; and facilities for the collection treatment movement or disposal of sanitary sewage.

Municipalities may, through Basic Planning Statements, Development Plans, and zoning bylaws exercise some control over water resources. The Act specifies that Development Plans may develop policy with the regard to: (b) the conservation and improvement of the physical environment; (e) the provision of municipal service and facilities including water and sewage systems; (g) the management and preservation of . . . water storage areas; and (o) any other matter the council considers advisable. However, the Lieutenant Governor in Council may, in the public interest, exempt any public work from any provision in the Act or its regulation, or in a Basic Planning Statement, a Development Plan, or zoning bylaw.

A rural municipality must approve a water development program before it can be implemented. The municipal approval process occurs through: adherence to planning and zoning requirements where a water management project is consistent with municipal zoning; acquisition of a development permit; through impact assessment review processes; and through the subdivision approval process. In the event that a rural municipality has not acknowledged water management projects in its zoning bylaw, an amendment to the zoning bylaw would be required. Ministerial approval for the zoning amendment, and hence, of the water management project would be required before the project could proceed.

Where water development projects require rights-of-way, such requirements often involve the subdivision of land. As a consequence, the water development project will require approval through the subdivision approval process. In the event that the rural municipality rejects the project, the proponent can appeal to the Provincial Planning Appeals Board for redress. If no approvals for the development are forthcoming under the Planning and Development Act, the project is terminated.

Pursuant to the Planning and Development Act, when seeking an approval for subdivision, the approving authority may require the owner to provide, without compensation from the Crown, land for an environmental reserve. The approving authority, in consultation with the Minister of Environment, may, when they consider it necessary, provide an area as an environmental reserve when land consists of:

- a ravine, coulee, swamp, natural drainage course, or creek bed
- land subject to flooding
- land abutting the bed or shore of any body of water for the purpose of prevention of pollution, preservation of the bank, or protection of land to be subdivided against flooding

The environmental reserve may then be used as a public park or any other use that the Minister may by regulation specify, but if not so specified it shall be left in its natural state.

3.7 NATIVE WATER RIGHTS

Within the South Saskatchewan River Basin are three Indian Reserves. The Muskoday Reserve straddles the South Saskatchewan River. Section 92(24) of the Constitution Act, 1867 vests power in the federal government to exclusively legislate with regard to "Indians and lands reserved for the Indians". Unfortunately, the question of water rights on Indian lands is presently the subject of continuing debate, and cannot be resolved simply by reference to federal legislation. In order to ascertain the extent of aboriginal rights in water, an extensive historical search would be necessary of both federal and provincial statutes dealing with water management and public lands, treaty rights would have to be examined in detail, and land claims considered. To date, little judicial authority exists.

Clearly, to undertake such a study is beyond the expectations of this study. However, it is fair to conclude that in light of the, as yet, undecided legal parameters of aboriginal interest in water management issues, any attempt at formulating a comprehensive scheme within the South Saskatchewan River Basin should include Native concerns and input.

3.8 MASTER AGREEMENT ON APPORTIONMENT

The Prairie Provinces Water Board which was established by this agreement administers the Master Agreement on Apportionment together with three "subsidiary" agreements: one between Saskatchewan and Alberta (this is called the First Agreement); one between Saskatchewan and Manitoba (the Second Agreement); and one between Canada and the three Prairie Provinces.

The parties to this Agreement are Canada, Alberta, Saskatchewan, and Manitoba. The parties agree, among other things, to apportion eastward flowing interprovincial water resources. The agreements provide a mechanism to settle disputes. The agreements will continue in force and effect until cancelled by an agreement in writing among the four parties to the Master Agreement.

The parties to the Agreement mutually agree to consider water quality problems and refer them to the Board and to consider the Board's recommendations thereon. This provision under the Agreement does not appear to surrender any of the provincial powers in relation to water quality.

Monitoring of both quantity and quality of the waters specified in the First and Second Agreements and the collection, completion and publication of water quantity and quality data required for the implementation and maintenance of the agreement shall be conducted by the Federal Government.

Apportionment of interprovincial water is based on "natural flow", i.e., the amount of water that would cross the border without human interference or human intervention. This does not, however, include waters which are not available for the use of Alberta because of international treaty obligations binding on that province. There are various ways of calculating "natural flow". In the instance of Alberta and Saskatchewan, the method of calculation that has been adopted by the board is the project depletion method.

Schedule A

With regard to the agreement between Saskatchewan and Alberta (Schedule A), the parties agree that an equitable apportionment of waters between the provinces would be to permit Alberta to make a net depletion of one-half the natural flow of the water from the watercourses that would naturally flow into Saskatchewan, subject to certain prior rights outlined in the agreement or mutually agreed upon in writing after the commencement of the agreement.

Alberta shall permit a quantity of water equal to one-half of the natural flow of each watercourse to flow into Saskatchewan. The actual flow shall be adjusted from time to time on an equitable basis during each calendar year. But Alberta may divert or consume any quantity of water from any watercourse provided it diverts water to which it is entitled of like quality from some other source into such watercourse in order to meet its commitments to Saskatchewan.

Of great import for our purposes is section 4 of Schedule A, which outlines that:

"4. Notwithstanding paragraph 3 hereof, the following special provisions shall apply as between the parties hereto with respect to the watercourse known as the South Saskatchewan River.

(a) Alberta shall be entitled in each year to consume, or to divert, or store for its consumptive use a minimum of 2 100 000 acre-feet net depletion out of the flow of the watercourse known as the South Saskatchewan River even though its share for the said year, as calculated under paragraph 3 hereof, would be less than 2 100 000 acre-feet net depletion, provided, however, Alberta shall not be entitled to so consume or divert, or store for its consumptive use, more than one-half the natural flow of the said South Saskatchewan watercourse if the effect thereof at any time would be to reduce the actual flow of the said watercourse at the common boundary of the said Provinces of Saskatchewan and Alberta to less than 1 500 cubic feet per second.

(b) The consumption or diversion by Alberta provided for under the preceding subparagraph shall be made equitably during each year, depending on the actual flow of water in the said watercourse and the requirements of each Province, from time to time."

The parties are instructed to work together and cooperate to the fullest extent in order to facilitate the most effective, economical and beneficial use of waters, including the construction and operation of approved projects of mutual advantage to the Provinces on a cost-share basis proportionate to the benefits derived therefrom by each Province.

Should any disputes arise, they are to be referred to the Exchequer Court of Canada (now the Federal Court).

Schedule B

Saskatchewan may in turn deplete by one-half the natural flow of watercourses that flow into Manitoba, subject to certain rights as may be mutually agreed upon in writing after the establishment of this Agreement. Similar provisions to Schedule A apply in terms of diversion and redirection into the watercourse, cooperation, and powers of reference to the courts.

Schedule C

Schedule C describes the membership functions, composition, duties, authority, and operation of the PPWB. For further details, the reader is directed to Section 6.2 of this report.

4.0 FEDERAL AGENCIES

4.1 INTRODUCTION

Federal legislation pertaining to water resource management acknowledges that the provinces own the water. However, it also recognizes that the Federal Government has certain responsibilities and rights with respect to water and the provinces share responsibilities on interjurisdictional streams. Also, there are national implications to water development and management in general, and there are federal interests in such items as droughts and floods, planning, environmental protection, data collection, navigation and shipping, federal lands such as Indian Reserves and National Parks, and national standards relating to food and water contaminants.

Considering the South Saskatchewan River Basin Study there are three broad areas of federal involvement of particular interest. These are:

- water quantity and quality as it crosses inter-provincial and international boundaries
- agreements with the provinces to achieve water resource management goals and objectives that are mutually acceptable to both levels of government
- national water resource data collection programs

As indicated, federal interest in water is broad and it crosses many departments. This interdepartmental perspective has been highlighted in the Federal Water Policy which was issued in 1987. This policy is a cabinet approved document, superseding the 1978 "Federal Policy Statement on Inland Waters", and represents a framework for federal activity in water management. The Federal Water Policy, because of its over-all governmental and interdepartmental application, may become a powerful administrative document. The policy nevertheless clearly articulates the need for federal and provincial cooperation in all areas relating to water resource management.

The overall objective of the policy is "to encourage the use of water in an efficient and equitable manner consistent with the social, economic, and environmental needs of present and future generations". This objective is supported by two main goals, first of which is "to protect and enhance the quality of the water resource," and the second, "to promote the wise and efficient management and use of water."

The federal government proposes to use five strategies to achieve its stated goals. All these strategies have application to the South Saskatchewan River Basin and indicate the courses of action which define the federal government's role in water matters. The first strategy is the development of a water conservation program and a value for water through the application of water pricing and demand management techniques. The second strategy is to provide national leadership in water resource management through improved research, technology development, and data information collection systems. The third strategy is to encourage integrated approaches to the planning and development of water resources. The fourth strategy is to develop legislative responses to achieve goals. The fifth strategy is to promote a greater level of public awareness of and participation in water resource planning, development, and evaluation processes.

The Federal Water Policy is not legislation; supportive legislation within the federal purview is likely to follow within the next few years.

From the perspective of federal legislation, two government departments and the legislation that they administer are particularly important in water management in the South Saskatchewan River Basin. The two departments are Environment Canada, and Agriculture Canada; the legislation of particular importance is the Government Organization Act (1969), the Canada Water Act (1970), and the Prairie Farm Rehabilitation Act (1935).

4.2 ENVIRONMENT CANADA

The Authority of Environment Canada stems from the Government Organization Act (1969). By the terms of the Act, Environment Canada was given responsibility over, among other items, federal interests in the preservation and enhancement of the quality of the natural environment, including water, air, and soil quality.

As they pertain to water and to this study, Environment Canada interests are specified in the Government Organization Act, the Canada Water Act and the Environmental Contaminants Act (to be repealed and replaced by the Canadian Environmental Protection Act). Environment Canada also has responsibility for administering pollution control provisions of the Fisheries Act, and the pollution section of the Migratory Birds Convention Act, Migratory Birds Regulations

Section 35. Finally, the Department receives over-all guidance in water management from the Federal Water Policy, issued in 1987.

Much of the federal interest in water resource management in Saskatchewan is structured through the provisions of the Canada Water Act, which encourages federal-provincial cooperation in water resources issues.

Part I of the Act provides for the establishment of federal-provincial consultative arrangements for water resource matters; and for co-operative agreements with the provinces for the development and implementation of plans for the management of water resources. This part also enables the Minister, directly, or in co-operation with any provincial government, institution, or person, to conduct research, collect data, and establish inventories associated with the water resources.

Other parts of the Act provide for:

- federal-provincial management where water quality has become a matter of urgent national concern
- inspections and enforcement
- establishment of Advisory Committees
- undertaking public information programs

Environment Canada is comprised of three Services, of which only Conservation and Protection has a significant interest in water resource management in the basin. Within Conservation and Protection are three branches: Inland Waters Directorate, Environmental Protection, and the Canadian Wildlife Service. Each of these is discussed in detail below.

4.2.1 Inland Waters Directorate

Within Inland Waters Directorate (IWD) are three branches which have some involvement in basin management. These are:

- Water Resources Branch
- Water Quality Branch
- Water Planning and Management Branch

4.2.1.1 **Water Resources Branch** The Water Resources Branch, as part of Inland Waters Directorate, is responsible for federal water quantity and sediment monitoring programs, and for maintenance of the federal hydrometric network. In Saskatchewan, the hydrometric network is operated by the Branch under the Canada-Saskatchewan Water Quantity Monitoring Agreement, and under the direction of an Administrators Committee. This Administrators Committee is comprised of one representative from Environment Canada, Inland Waters Directorate, and one representative from SaskWater. The Administrators Committee in turn delegates the work to be done to a Coordinating Committee, comprised of one member from each of Inland Waters Directorate and SaskWater.

Responsibility for undertaking day-to-day monitoring of flows is given to the Branch's operating arm, the Water Survey of Canada. The Water Survey of Canada has also been involved in sediment data collection for Lake Diefenbaker, the South Saskatchewan River, and other locations in the Basin.

While the Water Survey of Canada undertakes the monitoring programs, the Hydrology Division, Water Resources Branch interprets and analyzes that data, reviews and analyzes hydrometric performance, and determines natural flows for purposes of inter-provincial apportionment.

4.2.1.2 **Water Quality Branch** The purpose of the Water Quality Branch is to provide authoritative, scientific, and technical information on water quality in Canada to the water resource managers, the scientific community, and the general public. The Water Quality Branch, as an operational arm of Inland Waters Directorate, is principally concerned with the water quality related to:

- international and inter-provincial waters
- federal lands where water resource management is a federal responsibility
- the federal responsibility for fisheries and migratory birds
- waters subject to impact by federally funded projects

The Water Quality Branch is also responsible for detecting emerging water quality problems and evaluating their impacts on inland waters from regional and national points of view.

In addition to the terms of the Government Organization Act (1969) and the Canada Water Act (1970), the Water Quality Branch also functions under the 1987 Federal Water Policy. Although this policy is a Cabinet document and not legislation, it reiterates the federal commitment to improve protection of water quality, enhance aquatic ecosystems through the development of water quality objectives, and monitor water quality where there is significant national interest.

The water quality considerations of the Federal Water Policy reinforce and state more explicitly the provisions of the federal acts. Among the water quality activities specified in the policy are establishing baseline information, identifying water quality trends on a national and regional scale, establishing water quality objectives and compliance monitoring for water quality objectives.

The Water Quality Branch monitors water quality on federal lands such as Indian Reserves, National Parks, and PFRA pastures. The Branch may undertake post-audit water quality monitoring on projects financed with federal funds.

The Branch also provides water quality monitoring, analysis, reporting, advisory functions to other agencies, such as maintaining water quality stations at inter-provincial boundaries for Prairie Provinces Water Board. Providing services to other agencies is only undertaken if such services fit within Departmental and Branch priorities. The Branch does not, for example, normally undertake water quality monitoring programs for municipalities.

Many Basin activities of the Water Quality Branch are accomplished through federal-provincial agreements permitted under the Canada Water Act. In this regard, the Branch co-operates with Saskatchewan Environment and Public Safety (Water Quality Branch) in:

- water quality monitoring in Lake Diefenbaker
- nutrient loading modelling for Lake Diefenbaker
- identifying and collecting data on ambient water quality conditions

Under the Canada Water Act, Canada and Saskatchewan can, by agreement, establish "water quality management areas" where water quality has become a matter of urgent national concern. To date, no water quality management areas have been established in Saskatchewan.

As part of its mandate, the Branch has to address water quality in Canada as part of the "State of the Environment" reporting process. To accomplish this, the Branch requires water quality information from areas not only at boundaries, but also within provinces. Since water quality within provinces has constitutionally been regarded as part of provincial responsibility, the Branch, through Inland Waters Directorate, had to have agreements with the provinces to establish a co-operative framework for collecting this water quality data. The Canada-Saskatchewan Environmental Coordination Accord, signed in the early 1980s, provided a co-operative framework for collecting water quality data. It has lapsed and is currently being renegotiated as an umbrella agreement, under which a number of sub-agreements will be drafted to deal with specific issues. Since the Accord lapsed, the federal and provincial Water Quality Branches have co-operated on an informal basis.

The Water Quality Branch is also involved in assisting two boards, as discussed below.

SOUTH SASKATCHEWAN RIVER BASIN STUDY BOARD

The Water Quality Branch is represented on the Board's Advisory Committee, the Technical Committee on Water Quality and the Management Strategies Technical Committee. Through the Board, the Water Quality Branch will work with Saskatchewan Environment and Public Safety to develop water quality objectives specific to conditions in the South Saskatchewan River Basin.

PRAIRIE PROVINCES WATER BOARD

The Water Quality Branch is represented on the Prairie Provinces Water Board's Committee on Water Quality.

4.2.1.3 Water Planning and Management Branch. The Water Planning and Management Branch of Inland Waters Directorate is responsible for providing information and technical assistance in the management of international and interprovincial waters, as well as any waters of national concern. Through its participation in the Regional Screening and Coordinating Committees, established to assist the federal Environmental Assessment and Review Process, the Branch is involved in reviewing major water projects funded wholly or in part by the federal government, including those funded through the Canada-Saskatchewan Economic and Regional Development Agreement. The Branch concentrates implementation of the provisions in the Federal Water Policy (1987).

Under the auspices of the Canada Water Act, the Water Planning and Management Branch is responsible for establishing federal-provincial water resource management planning programs, including the South Saskatchewan River Basin planning program. The Branch also provides a funding and supervisory role in any such joint planning studies, including the evaluation of consultants reports and the provision of technical assistance. Specific examples of Branch involvement include providing assistance in developing Terms of Reference for the basin study, providing overall policy guidance, conducting studies on the calibration of water use models, and membership on technical committees.

The Branch is involved in the following inter-agency linkages which assist it in its work.

SOUTH SASKATCHEWAN RIVER BASIN STUDY BOARD

A representative of the Branch co-chairs the Board's "Advisory Committee", and serves as alternate to the federal co-chairman of the study board. As well, Branch staff are members of the board's technical committees.

FLOOD DAMAGE REDUCTION PROGRAM

Through the Flood Damage Reduction Program, the Branch is involved in flood risk mapping and flood forecasting in co-operation with the province.

PRAIRIE PROVINCES WATER BOARD

At the Board's request, the Branch can provide technical assistance to the Prairie Provinces Water Board.

4.2.2 Environmental Protection

The mandate of Environmental Protection is to protect the quality of the environment as it relates to issues of national interest, or controlled by federal legislation. Regulations, guidelines and new technologies are developed and implemented in cooperation with other federal departments, provincial governments, industry, and non-government organizations.

Many federal standards set by regulations and under the jurisdiction of Environmental Protection are normally not applied in Saskatchewan because the relevant provincial legislation is more stringent. Hence, Environmental Protection would normally only become involved if the province is not enforcing its legislation adequately, and something of national interest is at risk.

Under an agreement between Fisheries and Oceans Canada, and Environment Canada, Environmental Protection has the responsibility for administering section 36 of the Fisheries Act dealing with the setting and enforcement of regulations to protect fish habitat. Except for railways, there are no federally regulated industries in the Basin, and Environmental Protection has not been involved to date in protecting fish habitat. Rather, these concerns are dealt with by SaskWater; Saskatchewan Environment and Public Safety; and Saskatchewan Parks and Renewable Resources.

Environmental Protection also provides technical advice to other departments on environmental concerns. Examples of this include the Atomic Energy Control Board on the disposal of low level nuclear wastes at the University of Saskatchewan, and Agriculture Canada on environmental problems associated with air transport of toxic chemicals from pesticide spraying close to Lake Diefenbaker.

4.2.3 Canadian Wildlife Service

The Canadian Wildlife Service was set up to implement the Migratory Birds Convention Act, and the Canada Wildlife Act. The main activities of the Service relate to monitoring and protection of migratory birds, and threatened and endangered wildlife. The Service has power to control the disposal of harmful substances in areas frequented by migratory birds, but the penalties are so low that protection concentrates more on avoiding future problems than penalizing current violators.

The main activities of the Canadian Wildlife Service in the basin study area relate to the fall congregation of migratory birds at Galloway Bay on Lake Diefenbaker and other locations on the river. The Service also chairs a Waterfowl Technical Committee, with representation from Ducks Unlimited and Saskatchewan Parks and Renewable Resources. This Committee reviews projects involving all these agencies, but has no approval or decision making powers. As well, in 1948 the Service established a Federal Bird Sanctuary on Duncairn Reservoir, a PFRA impoundment project, on Swift Current Creek. The Service also monitors wetlands and breeding habitat for waterfowl.

4.3 FEDERAL ENVIRONMENTAL ASSESSMENT AND REVIEW OFFICE

The Federal Environmental Assessment and Review Office (FEARO) is responsible for administering the federal Environmental Assessment Review Process (EARP). It was established by a cabinet directive in 1973, amended by Cabinet in 1975, reaffirmed in the Government Organization Act of 1979, and strengthened through an Order-in-Council in 1984.

The purpose of the Environmental Assessment Review Process is to ensure that the environmental consequences of all federal proposals, and proposals affecting areas of federal responsibility, are assessed for potential adverse affects early in the planning process. A project is considered federal if it is undertaken by a federal department, or may have an environmental effect on an area of federal responsibility, or involves a commitment of federal funds, is located on lands administered by the federal government or involves federal Crown Corporations.

Federal agencies are responsible for applying the Environmental Assessment Review Process for proposals within their area of decision-making responsibility and must make a screening decision. Records of environmental screening decisions by federal agencies, in terms of allowing projects to proceed with mitigation,, or recommendation for a Public Review by an independent Panel, are forwarded to Federal Environmental Assessment and Review Office for publication. The Federal Environmental Assessment and Review Office provides advice to the Minister on screening decisions as appropriate, and arranges Panel membership and terms of reference when requested by federal agencies.

To date, no project in the basin has been subject to a Public Review by a Panel, although a variety of projects have been screened, and results have been forwarded to the Federal Environmental Assessment and Review Office.

4.4 PRAIRIE FARM REHABILITATION ADMINISTRATION

4.4.1 Legislative Mandate

The Prairie Farm Rehabilitation Administration (PFRA) is a branch of Agriculture Canada. It was established by the Prairie Farm Rehabilitation Act in 1935 "to secure the rehabilitation of the drought and soil drifting areas in the Provinces of Manitoba, Saskatchewan and Alberta". Within these areas, PFRA was to develop and promote systems of farm practice, tree culture, water supply and land utilization to help stabilize the economy of the region.

The Minister designated for the purposes of this Act, (currently the federal Minister of Agriculture) may "subject to section 4, undertake the development, construction, promotion, operation and maintenance of any project or scheme under or by virtue of this Act, or enter into agreements with any province, municipality or person with respect thereto".

Under its mandate PFRA plans and administers a number of soil conservation and water development programs that contribute to the economic well-being of the prairies. Programs and activities of particular interest to the South Saskatchewan River Basin Study are summarized below.

PFRA's Rural Water Development Program provides technical and financial assistance to farmers and ranchers on the Prairies for the investigation and development of on-farm water sources and to small urban communities and groups of farmers for water sources for municipal, domestic and agricultural uses. Projects include wells, dugouts, pipelines and individual and neighbour irrigation schemes.

PFRA's Community Pasture Program operates some 87 pastures covering more than 915 000 ha in the Prairie Provinces. Primarily, they involve marginal lands seeded to grass.

Under its Tree Distribution Program seedlings are provided free to farmers, government agencies, Indian bands and agricultural organizations.

The Saskatchewan Irrigation Development Centre at Outlook, Saskatchewan, which is funded and operated by PFRA and SaskWater undertakes agricultural research activities and farming demonstrations.

A long-time PFRA program is the Southwest Saskatchewan Irrigation Projects. It involves irrigation of some 15 000 ha of land in the Southwest including the Swift Current Creek Basin, from 22 PFRA-owned reservoirs. These reservoirs also serve more than 600 farmers and ranchers, a number of towns and the city of Swift Current.

Soil conservation activities, another important area of PFRA technical and financial assistance to farmers, are now carried out under federal-provincial cost-shared agreements which are discussed in the following pages.

4.4.2 Cost-Shared Programs

PFRA's responsibilities include implementation activities under various federal-provincial agreements. Some agreements with Saskatchewan and resulting programs of interest to this study are discussed below.

THE SOUTH SASKATCHEWAN PROJECT

PFRA's involvement with the South Saskatchewan River Project is long-standing. PFRA conducted the extensive investigations required, prepared the engineering designs and was responsible for construction of the Project under terms of a 1958 federal-provincial agreement, as a water supply for the rehabilitation of drought-prone agricultural areas. By terms of the agreement, PFRA retained ownership of the works and operated the reservoir (Lake Diefenbaker) until 1969 at which point ownership of the reservoir and related structures, land, and infrastructure, was turned over to the province. Subsequent amendments to the 1958 agreement provide for PFRA to supply engineering expertise and carry out physical operation of certain control gates and maintenance of the Gardiner and Qu'Appelle River dams on behalf of the province until 1994. At that time these responsibilities will, unless otherwise provided for, revert to the Province. By terms of the Agreement and its amendments, Saskatchewan pays PFRA for all the functions provided except for foundation monitoring costs which are shared.

Two PFRA members sit on the South Saskatchewan Reservoir Board, which provides effect liaison and co-ordination of the operation and maintenance of Lake Diefenbaker. The Board meets two or more times a year to review operations, maintenance requirements and any special work planned, and to project operations of the dams and reservoir over the next period. Currently, PFRA's primary role on the Board is to provide an engineering perspective with respect to safe and effective operation and maintenance of the project. Further details on the Board are provided in section 5.3.

ECONOMIC DEVELOPMENT AGREEMENTS

Through agreements with the province and/or municipalities PFRA has investigated, designed and constructed numerous water supply and sewage treatment systems. Some of the more noteworthy are discussed below.

A 10-year agreement signed in 1972 called the Canada-Saskatchewan Agricultural Service Centres Agreement resulted in financial and technical assistance through PFRA for provincial centres with populations over 2 000 (excluding Regina and Saskatoon). Then, in 1974, Canada and the province entered into a General Development Agreement (GDA) to provide co-operative initiatives for economic and socioeconomic development in Saskatchewan. Under the General Development Agreement the six-year Canada-Saskatchewan Interim Subsidiary Agreement on Water Development for Regional Economic Expansion and Drought Proofing was signed in 1979. It provided for drought proofing studies and water management and supply investigations to be undertaken and supplies to be developed for a number of Saskatchewan communities.

In 1984 Canada signed Economic and Regional Development Agreements (ERDAs) with the provinces of Alberta, Saskatchewan and Manitoba which expire in 1994. Designed to achieve a shared federal-provincial perspective on economic strategies, and provide a mechanism for co-ordinated and co-operative action in specific areas, the Economic and Regional Development Agreements are made possible under Section 36 of the Constitution Act (1982), which provides for the reduction of regional disparities. A number of sub-agreements, which are instruments for the implementation of Economic and Regional Development Agreements have been signed between Canada and Saskatchewan. Three sub-agreements of interest to this study are:

(1) Agricultural Development Sub-Agreement signed by the Federal Minister of Agriculture, and the Saskatchewan Minister of Agriculture.

(2) Irrigation Based Economic Development Sub-Agreement signed by the Federal Minister of Agriculture and the provincial minister's representative for SaskWater.

(3) Canada-Saskatchewan Agricultural Community Water Infrastructure Sub-Agreement signed in 1984 by the Federal Minister of Agriculture and the Minister responsible for SaskWater.

Under the Agricultural Development Sub-Agreement, there is a federal and provincial chairman. The Agreement provides funds and processes for preparation and submission of proposals, and distribution of money for accepted proposals. The managers of the Agreement undertake day-to-day monitoring of the program and set up sub-committees as required. A sub-program under this sub-agreement, implemented by PFRA, provides for investigation and construction of group irrigation projects in Saskatchewan.

The parties to the Irrigation Based Development Sub-Agreement are represented by SaskWater and Agriculture Canada. PFRA provides one of the federal members of the Management Committee, and gives advice to both the Management Committee and program sub-committees. This agreement provides federal and provincial funds to implement irrigation projects and economic development programs based on irrigation through three programs. Program 1 provides for the shared cost of developing new irrigation water supply systems and is being implement by SaskWater. Program 2 provides for economic development and support activities related to irrigation with projects implemented by either Canada or Saskatchewan. Program 3, being implemented by PFRA, provides for improvements to the previously mentioned irrigation projects in southwest Saskatchewan.

PFRA was also responsible for implementing the 1984 Subsidiary Agreement on Agricultural Community Water Infrastructure. Funds and technical help provided by this five-year enabled some 42 large agricultural communities to upgrade or construct water supply, treatment, distribution, and waste disposal systems.

Other Economic and Regional Development Agreements subagreements signed in 1984 with the provinces of Saskatchewan and Manitoba provided for PFRA to give technical, material and financial assistance to organized groups of farmers for soil conservation projects. These included conservation tillage, establishing shelterbelts, grassing waterways and salinity control. In Alberta, PFRA carried out soil conservation activities with the province based on a Letter of Understanding. Today those efforts continue under federal-provincial agreements on soil conservation which are part of the new National Soil Conservation Program. Commitments under this $150 million program are subject to soil and water conservation and development accords with the provinces. The Canada-Saskatchewan Accord was signed in 1989 and the Canada-Saskatchewan Agreement on Soil Conservation was signed two weeks later.

The agreement has two components: the Save our Soils Program directed toward on-farm soil conservation which is jointly implemented by PFRA and Saskatchewan Agriculture; and the Permanent Cover Program designed to reduce soil deterioration on high-risk cultivated lands by converting them to forage and/or tree cover which is administered by PFRA. Financial and technical support under the agreement is provided through the co-operative efforts of several contributing departments and agencies.

4.4.3 Co-operation With Outside Agencies

In addition to conducting its own programs and participating in cost-shared programs, PFRA co-operates with federal and provincial agencies on various other matters. These include studies and investigation of proposals and projects, and provision of technical advice and input through participation in various interjurisdictional and interagency boards, commissions, committees and agencies dealing with water matters. The following are on interest to the South Saskatchewan River Basin study:

- Prairie Provinces Water Board; the Director General of PFRA is a member of the Board, the PFRA staff are members of each of the Board's committees (see Section 5.2 for details)
- South Saskatchewan Reservoir Board (see Section 5.3 for details)
- Qu'Appelle Operations Advisory Committee which advises SaskWater on the operation of the Qu'Appelle River System including water releases from Lake Diefenbaker to the Qu'Appelle River (see Section 5.2.3.1 for details)

4.5 OTHERS

A number of other federal agencies are, or can be, involved in specific water resource management concerns. One example is Health and Welfare Canada, which monitors water quality, water supply, and waste treatment processes on federal lands, including Indian Reserves.

A second example is the Food Production and Inspection Branch of Agriculture Canada, which is leading a cooperative federal-provincial effort in monitoring pesticide residues in surface and groundwater supplies . The program involves a random sampling of water sources and is designed to identify excessive residues. Associated with Agriculture Canada in the program are the Water Quality Branch of Saskatchewan Environment and Public Safety, and Environment Canada's Water Quality Branch.

5.0 PROVINCIAL AGENCIES

5.1 INTRODUCTION

The Province of Saskatchewan acquired the authority to manage the water resources within the province with the passage of the Resources Transfer Agreement in 1930. Accordingly, Saskatchewan became responsible for all aspects relating to data collection, interpretation, analysis, policy and program planning, and management of both the quantity and quality of surface water and groundwater supplies.

There is a multiplicity of provincial legislation pertinent to water management in Saskatchewan. Much of it--that relating to resource planning, development, and project approvals--is administered by SaskWater. Some water quality matters and regulatory enforcement remains under the purview of Saskatchewan Environment and Public Safety. In addition to these departments, there are also a number of other provincial agencies which have an input into water management in the South Saskatchewan River Basin. This chapter will identify the range of provincial agencies involved in water management in the basin, and describe their authority and activities.

5.2 SASKWATER

SaskWater was established in 1984, as a consequence of the passage and proclamation of The Water Corporation Act. SaskWater is also responsible for all or parts of the following statutes:

- Conservation and Development Act
- Watershed Associations Act
- Water Users Act
- Irrigation Districts Act
- South Saskatchewan River Irrigation Act
- Groundwater Conservation Act
- Water Power Act

The authority of SaskWater is specified in Section 16(1) of The Water Corporation Act and is further amplified in numerous other sections of the Act. Key aspects are:

- to manage, administer, develop, control, and protect the water and related land resources of Saskatchewan

- to promote the economical and efficient use, distribution, and conservation of the water and related land resources of Saskatchewan

- to maintain and enhance the quality and availability of the water and related land resources of Saskatchewan for domestic, agricultural, industrial, recreation, and other purposes

- to undertake and co-ordinate research, investigations, surveys, studies and programs

- to enter into agreements

- to make water available to any person

- to receive, consider, and approve applications from persons for the use of water or for approval to construct a water use facility

- to regulate and control the flow of water in any lake, river, reservoir, or other body of water within Saskatchewan

- to construct, cause to be constructed, or acquire by lease, purchase or joint venture, or otherwise acquire, manage, and operate any works

In addition, the Act specifies SaskWater involvement in the collection, analysis and dissemination of water resource data, the undertaking of water resource planning programs, and the maintenance of communications with PPWB and other organizations that have a bearing on water management in Saskatchewan.

SaskWater is organized into four divisions, each of which is headed by a Vice President, and three branches. The four divisions are:

- Finance and Administration
- Water Management
- Corporate Affairs
- Operations

The three branches are: Legal Branch, Engineering Branch and Program Development.

The Finance and Administration Division and the Corporation Affairs Division perform internal SaskWater functions, with no direct bearing on this study. Each of the other divisions, however, has a direct and major role in the basin and will be considered in detail.

5.2.1 Water Management Division

The Water Management Division is responsible for the overall management of the province's water resources, provision of support services to the regional offices, and participation in the management of interjurisdictional water matters. These responsibilities are carried out by two branches of the Water Management Division. The Hydrology Branch provides stream flow monitoring, flow forecasting, hydrological investigations and advisory service to local government organizations, The Integrated Resources Branch is responsible for basin planning, flood plain management, project evaluations and environmental assessment. The Registrar of the division is responsible for maintaining water licence records.

In addition to its own development programming, the Water Management Division participates in numerous federal and provincial government committees, boards, or programs which pursue a variety of water resource management objectives. About half of these would have some relevance to the South Saskatchewan River Basin. Some of the more significant ones are:

- Reservoir Development Area Regulations
- Flood Damage Reduction Program
- Prairie Provinces Water Board
- South Saskatchewan Reservoir Board

RESERVOIR DEVELOPMENT AREA REGULATIONS

A Reservoir Development Area (RDA) can be created by the Minister responsible for SaskWater under Section 32 of the Environmental Management and Protection Act. Administration of this Section of the Act was transferred to SaskWater in 1987. An Reservoir Development Area is comprised of lands surrounding a reservoir. The Lake Diefenbaker Reservoir Development Area comprises of approximately 5 650 square kilometres.

The purpose of an Reservoir Development Area is to provide for the safe and orderly development of land around a reservoir. A primary function of the Reservoir Development Area is to provide for efficient use of the reservoir and to help minimize conflicts with reservoir operations, recognizing its various intended purposes.

Reservoir Development Area's are restricted to the lands surrounding the reservoirs, and therefore do not have a direct role in water management. Reservoir Development Areas do, however, have a land-use zoning and approval function related to agricultural, commercial, residential, recreational, and other land uses. Because of this land use control function, a Reservoir Development Area has an indirect role in determining use and management of water in a reservoir. In turn, this indirect role has implications for the management of water resources within the basin.

FLOOD DAMAGE REDUCTION PROGRAM

The Flood Damage Reduction Program (FDRP) arises from a federal-provincial agreement designed to reduce flood damages. From the federal perspective, the Flood Damage Reduction Program is authorized by the Canada Water Act. The Program is administered by the Water Management Division of SaskWater.

The original Canada-Saskatchewan Flood Damage Reduction Program Agreement was signed in 1977 and continues under amended agreements signed in 1987. The Flood Damage Reduction Program currently operates under the "General Agreement Respecting Flood Damage Reduction Through Flood Area Management", "An Agreement to Amend the General Agreement Respecting Flood Damage Reduction through Flood Area Management"; and two subsidiary agreements: "An Agreement Respecting Flood Hazard Mapping and Studies", and an "Agreement Respecting Community Floodplain Management Measures".

The Program is administered under the auspices of a Steering Committee of two federal and two provincial representatives. At the time of writing, these represent Inland Waters Directorate, and SaskWater. The Chairmanship of the Committee rotates annually between federal and provincial representatives.

Section 2 of the General Agreement describes an approach to flood damage reduction to be implemented through co-operative Federal-Provincial Agreements respecting flood hazard mapping and related studies, flood forecasting systems, flood warning systems, flood proofing techniques, works to regulate water flows and levels, and property acquisition.

The purpose of the "Agreement Respecting Flood Hazard Mapping and Studies" is to determine the most appropriate measures to reduce the potential for flood damage in flood hazard areas, through provisions for mapping, hydraulic, and other studies. Schedule A to the sub-agreement specifies which flood hazard areas will be examined over the five-year course (1987 - 1992) of the Agreement. In the basin, sections of the South Saskatchewan River at Saskatoon, and Swift Current Creek at Swift Current have been identified for study.

The Flood Hazard Mapping and Studies Agreement is administered by a Technical Committee, comprised of two federal and two provincial representatives. The Technical Committee reports to the Flood Damage Reduction Program Steering Committee.

The final Agreement associated with the Flood Damage Reduction Program is the "Agreement Respecting Community Floodplain Management Measures". This five-year Agreement (1987 - 1992) provides for federal-provincial cost sharing of specific structural and non-structural flood control measures. Two measures relevant to the basin are the possible construction of a diking system at Swift Current, and the possible preparation and implementation of computerized models to improve flood forecasting. If they proceed, flood forecasting models would include the construction and operation of additional hydrometric stations to provide an adequate flood forecasting hydrometric network.

The work of this Agreement is achieved through a Technical Sub-Committee on Community Floodplain Management Measures, which reports to the Flood Damage Reduction Program Steering Committee. Any project involving the regulation of water flows and levels will be subject to provincial environmental impact assessment.

PRAIRIE PROVINCES WATER BOARD

The Vice-President, Water Management of SaskWater participates as a member of the Board. A representative of the Division represents Saskatchewan on the Board's Committee on Hydrology and Committee on Groundwater. The role of the Board is considered in greater detail in Section 6.2.

SOUTH SASKATCHEWAN RESERVOIR BOARD

The Water Management Division of SaskWater provides the chairman of, and the secretary to, the Board. The Board, however, is independent of SaskWater, and is discussed separately in Section 6.3.

5.2.2 Engineering Branch

WETLANDS TECHNICAL ADVISORY COMMITTEE

The Wetlands Technical Advisory Committee is an interdepartmental committee chaired by a representative of the Engineering Branch, and has representation from Saskatchewan Environment and Public Safety, Saskatchewan Agriculture and Food and Saskatchewan Parks and Renewable Resources. The Committee was established to review water development project proposals affecting wetlands and resolve conflicts which may arise between wildlife, fisheries, agriculture, and environmental interests. Reviewed projects are sponsored or supported by the Committee's member agencies, or by Ducks Unlimited.

Projects with a wetlands component are submitted to SaskWater, which distributes the project proposal to members of the Committee. If any Committee member raises significant concerns, the project is reviewed in detail by the Committee which attempts to reach a consensus. If a consensus is reached, the project is forwarded to SaskWater with a conditional or unconditional clearance to issue an approval for the development of the proposal. If no consensus is reached, the proposal is submitted to the Saskatchewan Wetlands Committee, the parent committee, for ultimate resolution. This latter committee has not met since February 22, 1983.

Where a proposal is deemed to be a "development" under The Environmental Assessment Act, an environmental impact assessment must be undertaken, a statement prepared, and subsequent approval received pursuant to this Act. In these instances, clearance of a proposal by the Wetlands Technical Advisory Committee is not required.

5.2.3 Operations Division

It is through the Operations Division that SaskWater maintains its direct contact with users and the public generally. The Regional Offices deliver SaskWater's policies and programs. Through the Operations Division, the Saskatchewan Water Utility provides services to clients and generates revenue for the Corporation.

5.2.3.1 Regional Offices. The six regional offices of SaskWater report to head office through the Operations Division. Three of the six regions occupy a portion of the South Saskatchewan River Basin. The regional offices provide watershed management services, program delivery, and project approvals to municipalities, local governments, groups and individuals. Most contact between SaskWater and water users happens at this level as the regional offices implement the policies and programs of SaskWater.

The organizational structure varies from region to region, but commonly involves customer and engineering services departments, and one or more district supervisors, all of whom report to the regional manager.

A Watershed Advisory Board has been appointed to each region to provide public input into the operations of regional offices. The Boards also provide ongoing liaison between the regions and the public, and can assist in settling disputes between users. Members are appointed by the Minister responsible for SaskWater.

Technical and administrative assistance is provided by the region to clients for the various regulatory programs administered by SaskWater. This assistance is provided for all construction or operation approvals issued for surface water, drainage, groundwater, or municipal water and sewage projects.

Approval processes are initiated and completed at the regional level. Most, but not all, water projects must acquire approvals from SaskWater. On-farm dugouts and water wells used for domestic water supply do not require approvals. Other water projects require an "Approval to Construct" and an "Approval to Operate". All approvals are subject to certain terms and conditions as appropriate. All approvals are reviewed by Saskatchewan Environment and Public Safety and subject to any terms and conditions they specify.

"Approvals to Construct" and "Approvals to Operate" a project are both issued at the regional office level. Any terms and conditions attached to Approvals are identified, specified in the approval, and monitored regionally. It is through this approval process that SaskWater exercises the province's constitutional power over water resources.

The regional offices are also responsible for delivering the wide range of assistance programs offered by SaskWater, related to the management, administration, development, control and protection of water and related land resources. The assistance programs are available to individuals, farmers, ranchers, local governments, and local organizations. The programs currently being offered and applicable to the Basin include:

- Water Control Assistance Program
- Erosion Control Assistance Program
- Channel Clearing Assistance for Rural Municipalities
- Flood Control Assistance Program for Urban Centres
- Technical Assistance for Private Drainage Works
- Test Drilling Technical Assistance Program
- Community Well Development Technical Assistance Program
- Dugout and Small Storage Reservoir Technical Assistance Program
- Farm Dugout Pumping Assistance Program
- Irrigation Water Supply Development Assistance Program
- Individual Irrigation Assistance Program
- Water Monitoring Assistance Program
- Municipal Water Technical Assistance Program

- Water and Sewer Technical Assistance for Small Towns, Villages, and Hamlets
- Construction and Operation of Water Supply Projects

Another important function of the regional offices is to oversee and assist any Watershed Associations, Irrigation Districts, Conservation and Development Authorities, and Water User Associations. The regional offices can be instrumental in setting up any of these organizations, providing technical and financial assistance to their projects, and providing administrative assistance for their day-to-day operations. Specific information on each of these groups is provided in Chapter Six.

QU'APPELLE OPERATION ADVISORY COMMITTEE

The East Central Regional Office has one additional river basin management function. The Regional Manager chairs the Qu'Appelle Operation Advisory Committee. This committee replaces the former Qu'Appelle Operations Board which will disbanded because of its overlap with the roles of the East Central Region's Watershed Advisory Committee. The Qu'Appelle Operation Advisory Committee provides information to SaskWater regarding diversions to the Qu'Appelle River system. The South Saskatchewan Reservoir Board is advised of proposed diversion volumes. Representation on the committee includes SaskWater, Saskatchewan Parks and Renewable Resources, Saskatchewan Environment and Public Safety, and PFRA.

5.2.3.2 Water Supply Utility. The Water Supply Utility operates single and multi-purpose water supply systems. The Utility's office is located in Watrous, with staff also located in Saskatoon and at Blackstrap Reservoir. It reports directly to the Vice President of Operations at the head office in Moose Jaw.

Water supply systems, currently operated by Water Supply Utility, are supplied from the South Saskatchewan River. These systems include: the Saskatoon Southeast Water Supply (SSEWS) system, Saskatoon Treated Water Supply Systems, and Saskatoon West Water Supply System. The SSEWS system acquires its water from the East Side pump plant, which is operated by the South Saskatchewan River Irrigation District (SSRID) No. 1 . The Water Supply Utility purchases water from the SSRID, paying to it a share of the costs of operating the pump plant. In the case of the Saskatoon Treated Water Supply System, the Water Supply Utility purchases water from the city of Saskatoon. The Water Supply Utility owns outright all facilities associated with the Saskatoon West Water Supply System.

Where the Water Supply Utility itself withdraws water from Lake Diefenbaker, the Utility is licensed by SaskWater and regarded as a single user. The Utility then provides, under contract, water to its customers.

Major water supply systems operated by the Water Supply Utility have frequently been constructed in order to supply large volumes of water to large users. As a result, major industrial and municipal consumers are provided with guaranteed water flows over a five-year contract period. In the SSEWS system, the Utility also has a 20-year contract to provide surface water to Saskatchewan Parks and Renewable Resources for recreation purposes, as well as for a number of waterfowl breeding projects.

In the past, individual farmers using water from any of the Utility's water supply systems have been able to do so through a contract with Saskatchewan Agriculture and Food. This contract terminated in 1988. Individual farmers now contract individually with the Utility for water. Utility contracts with farmers offer no guaranteed flows and are subject to cancellation on 30 days notice. The differential treatment of farmers from other users, does not in itself imply a water allocation or management strategy. Rather, the firm contracts with large municipal and industrial users reflects their financial contribution to the capital and operating costs of the system. Surplus water is made available to other users, including farmers. Farm use is regarded as interruptible and is available only as long as there is surplus water in the system not required by the other users.

The Water Supply Utility sells water directly to its customers. Sales are metered. Industrial, municipal, and similar large users are billed monthly. Individual farmers are billed quarterly for their water consumption.

The Water Supply Utility is an important revenue generator for SaskWater. Gross revenues contributed by the Utility through SaskWater for fiscal years 1986 and 1987, amounted to approximately $4 million in each year.

5.2.3.3 Irrigation Services. In July of 1987, the Irrigation Branch of Saskatchewan Agriculture and Food was transferred to the Operations Division of SaskWater at Outlook. Irrigators now deal with the appropriate Regional Office for technical assistance. If requested, any Regional Office may then approach West Central Region for specific expertise offered by its irrigation specialists.

5.3 SASKATCHEWAN ENVIRONMENT AND PUBLIC SAFETY

Saskatchewan Environment and Public Safety is responsible for administering the Environmental Management and Protection Act and the Environmental Assessment Act as well as other legislation of little direct relevance to this study. Two main branches of the department, the Water Quality Branch and the Environmental Assessment Branch, are both directly involved in water management in the Basin, and are discussed below.

5.3.1 Water Quality Branch

The Water Quality Branch of Saskatchewan Environment and Public Safety is responsible for the general supervision, control and regulation of all matters concerning water quality and its impairment by pollution. The basic responsibilities of the Water Quality Branch are described in Section 14 of the Environmental Management and Protection Act. Section 17 of the same Act and section 56 of the Water Corporation Act provides the Branch with its permitting responsibilities and powers.

Branch responsibilities are exercised through participation in Saskatchewan's environmental assessment review process and the Branch's role as a licensing agent for any project involving drinking water works, sewage, and industrial effluents.

The Water Quality Branch can, through the Environmental Assessment Branch, or SaskWater, or on its own authority, issue orders for water supply systems and permits for sewage systems, and set terms and conditions with respect to water quality and water pollution matters. If the Water Quality Branch denies approval, the project cannot proceed.

Farmland drainage works are exempted from the Environmental Management and Protection Act; hence, no permits are required from the Water Quality Branch for these works. Water quality aspects of irrigation projects are handled on a case-by-case basis, but to date only larger surface water projects, and all effluent irrigation projects have been reviewed by the Water Quality Branch.

The Water Quality Branch also provides a policy and standard setting role. To this end, the Branch has designed and published Municipal Drinking Water Quality Objectives and Surface Water Quality Objectives, and Guides for Sewage Works Design. Water Quality objectives are used to complement the regulatory process and to set standards for sewage and water treatment processes.

The Branch is currently involved in defining specific water quality objectives for the South Saskatchewan River Basin. Research in the design of the objectives is being undertaken by the Branch for the South Saskatchewan River Basin Study's Water Quality Technical Committee.

Illustrative of its surveillance activities, the Water Quality Branch undertakes water quality monitoring programs, maintains a network of water quality monitoring stations, undertakes water quality studies such as a nutrient loading study on Lake Diefenbaker, maintains the ESQUADAT data base, and collects and interprets statistical data on water quality.

Saskatchewan Environment and Public Safety and its Water Quality Branch is currently developing a water quality agreement with Environment Canada's Inland Waters and Land Directorate. The agreement will deal with the water quality monitoring network, laboratory capabilities (including spill and contingency responses), and methods of sharing information.

In addition to undertaking its own programs, the Water Quality Branch works with and through other agencies and committees to achieve its objectives. Examples of these other organizations are noted and described below.

PRAIRIE PROVINCES WATER BOARD

The Water Quality Branch participates in the Board's Committee on Water Quality.

ENVIRONMENTAL ASSESSMENT BRANCH

The Water Quality Branch participates in technical reviews of all projects with water quality and water pollution implications submitted to Saskatchewan's Environmental Assessment Branch.

QU'APPELLE RIVER SYSTEM OPERATION ADVISORY COMMITTEE

The Branch participates in the Qu'Appelle Operations Committee.

5.3.2 Environmental Assessment Branch

The Environmental Assessment Branch (EAB) was created as a means of administering Saskatchewan's Environmental Assessment Act (1979). As with the Water Quality Branch, it reports directly to the Assistant Deputy Minister of Saskatchewan Environment and Public Safety.

By terms of the Act, any developer or proponent of a project which may be expected to have impacts on the environment is responsible for the preparation and submission of a Project Proposal to the Environmental Assessment Branch for screening. If the Branch determines that the project is unlikely to have significant residual impacts on the environment and meet the regulations and requirements of the appropriate legislation, the Environmental Assessment Branch may excuse the proponent from further impact assessment research. In order to satisfy approval requirements of sections 56 and 57 of the Water Corporation Act, project proposals other than domestic projects, individual irrigation projects, private drainage projects, and Ducks Unlimited projects are forwarded to the Environmental Assessment Branch for clearance. Blanket approvals for the mentioned project types was given by Saskatchewan Environment and Public Safety in early 1985.

In the event that screening raises significant environmental concerns, the Environmental Assessment Branch will demand that the proponent prepare an impact statement. The impact statement will in due course be submitted to the Environmental Assessment Branch, and after following a legislated review process, the Minister may give approval to the proponent to proceed with development, give conditional approval, or deny approval to proceed with the project.

Impact statements submitted to the Environmental Assessment Branch are distributed to an Environmental Assessment Review Panel whose members review the statement from the perspective of their own disciplines and Branch interests. The Environmental Assessment Review Panel includes representation from the following departments, although not all statements are submitted for technical review to all of the named departments:

- Saskatchewan Environment and Public Safety
    - Water Quality Branch
    - Air and Land Protection Branch
    - Mines Pollution Control Branch
- Saskatchewan Agriculture and Food
- Saskatchewan Energy and Mines
- Saskatchewan Parks and Renewable Resources
- Saskatchewan Rural Development
- Saskatchewan Economic Diversification and Trade
- Saskatchewan Social Services
- Saskatchewan Human Resources, Labour and Employment
- Saskatchewan Education
- Saskatchewan Community Services
- Saskatchewan Family Foundation
- Saskatchewan Health
- Saskatchewan Highways and Transportation
- SaskWater
- Northern Development Services
- Indian and North Affairs Secretariat

In the event a project involves an adjacent province, the Environmental Assessment Branch deals directly with the assessment organization in that province. For example, the Environmental Assessment Branch deals directly with Alberta Environment where projects in Alberta affect Saskatchewan. In cases where there may be a federal interest in the project, the Environmental Assessment Branch will submit statements to Environmental Protection, Environment Canada for entry into the federal Environmental Assessment and Review Process. If appropriate, Environmental Protection will then forward the project to the Regional Steering and Coordination Committee in Edmonton, who will then co-ordinate the input from federal departments into the provincial review process.

Because of the need to avoid actual and perceived conflicts of interest, Environmental Assessment Branch is not heavily involved with inter-agency committee work.

5.4 SASKPOWER

SaskPower is a user of water at Lake Diefenbaker through the Coteau Creek Generation Station. Like all users, except SaskWater, SaskPower has limited capability for independent action relating to water use or management decisions. It has a mandate to provide adequate electrical energy at the lowest possible cost. Hydro-electric power from the Gardiner dam is an inexpensive form of energy, and SaskPower therefore strives to maximize use of this source, particularly at times of peak load. It carries out the scheduled release of water from Lake Diefenbaker under the direction of SaskWater.

In the case of an emergency, however, SaskPower has the right to respond accordingly.

SaskPower is a major renter of water from SaskWater. In fiscal year 1986, revenues paid by SaskPower under the Water Power Act to SaskWater amounted to approximately $1.6 million. January 1, 1987, water rental rates quadrupled. Accordingly, the total dollar value paid in 1987 to SaskWater amounted to nearly $6 million, of which $1.129 million was paid for water use at Coteau Creek generating station.

5.5 SASKATCHEWAN PARKS AND RENEWABLE RESOURCES

Saskatchewan Parks and Renewable Resources, through the Parks Act and both federal and provincial Fisheries Act, has the authority to deal with park and fish related issues pertaining to the basin. Its concerns relate primarily to non-consumptive instream recreation and fishery uses and are addressed by the Parks Branch and Fisheries Branch. Three provincial parks (Danielson, Douglas and Saskatchewan Landing) are directly adjacent to the South Saskatchewan River, and another two (Blackstrap and Pike Lakes) use water from the river. Under agreement between SaskWater and Saskatchewan Parks and Renewable Resources water is also provided from the reservoir for Ducks Unlimited's wildlife marsh projects along the SSEWS system.

Saskatchewan Parks and Renewable Resources deals with other provincial agencies on water management issues through two committees. These committees are the Wetlands Technical Advisory Committee, and the Qu'Appelle Operations Committee. Other input relating to water management issues is provided on an informal basis as required.

5.6 SASKATCHEWAN AGRICULTURE

With the recent transfer of the Irrigation Branch to SaskWater, Saskatchewan Agriculture has become much less involved in river related activities. The Department's major involvement now is through the administration of long term agricultural leases of provincial Crown Land.

A farmer leasing Crown Land from Saskatchewan Agriculture and wanting to irrigate would first approach the Lands Branch for the authority to proceed with land improvements. If Lands Branch deemed it viable and appropriate from an agricultural standpoint, the farmer would then proceed through the usual SaskWater approval process. If irrigation were to be developed, the Department would apply to SaskWater regional offices and proceed through SaskWater's operational phase. One exception is the demonstration irrigated sheep pasture operating near Outlook. In this case, the Sheep and Wool Commission acts as a third party to develop the project.

Saskatchewan Agriculture is also involved in water use concerns through the Wetlands Technical Advisory Committee, and a Research and Demonstration Committee relating to the Irrigation Based Economic Development Agreement.

5.7 SASKATCHEWAN RURAL DEVELOPMENT

Saskatchewan Rural Development has a direct involvement with water management through its control over ferries and bridges. River flows, and in particular, flood levels, are all of concern to the planning and management of ferries and bridges. Rural Development also has an indirect, but important, involvement in water management through land use controls and policies, pursuant to the Planning and Development Act.

6.0 FEDERAL-PROVINCIAL JOINT AGENCIES

6.1 INTRODUCTION

Involved in water management in the South Saskatchewan River Basin are three boards established under a Federal-Provincial Agreement, which technically are neither federal nor provincial. In each case, the agency administers the Agreement. These boards are comprised of federal and provincial members, with both levels of government being considered equal. For administrative purposes, however, each of the boards have linkages to individual government agencies or departments. These linkages serve not so much to establish control, but rather to provide for administrative convenience.

The three joint federal-provincial boards considered are:

(1) Prairie Provinces Water Board
(2) South Saskatchewan Reservoir Board
(3) South Saskatchewan River Basin Study Board

6.2 PRAIRIE PROVINCES WATER BOARD

Under the Master Agreement on Apportionment signed in 1969, the parties agreed to revoke the 1948 agreement under which the original the Prairie Provinces Water Board was established and to reconstitute the Board in the form described in Schedule C of the 1969 Agreement. The Board is an independent agency that receives administrative support from Environment Canada and whose responsibilities are exercised through the staff and resources of member governments.

Each government authorized its participation in the Master Agreement by separate Order in Council.

Under Schedule C of the Agreement, the Board is charged with the following responsibilities:

(1) The Board has responsibility for administering the Master Agreement as well as several schedules, two of which are inter-provincial agreements relating to the apportionment of eastward flowing water from an upstream province to the next downstream province.

(2) Review of water quality problems particulary problems located at inter-provincial boundaries and development of recommendations for their resolution.

(3) Monitoring flows and water quality at the inter-provincial boundaries.

(4) The Board would be provided with the ability to establish an administrative structure to undertake its responsibilities.

By terms of the Agreement, the Prairie Provinces Water Board seeks to ensure that inter-provincial apportionments of water are adhered to by the members. Canada is responsible for monitoring quantity and quality of waters as specified in Schedule A and B and the collection and publication of data, river discharge analyses, and natural flow calculations on the South Saskatchewan and Qu'Appelle Rivers. Natural flow reports are forwarded to the Executive Director of the Prairie Provinces Water Board and to each of the Board members. If there are any indications that certain of the Agreement may not be met, members discuss the situation and arrange for the necessary steps to be taken to ensure that the terms of the 1969 Agreement are met. Although never done, any dispute between the parties concerning administration of the Agreement can be referred to the Exchequer Court, now called the Federal Court of Canada.

In addition to this apportionment monitoring function, the Prairie Provinces Water Board considers other water resource management issues as requested. These matters include water quality management and other issues pertaining to water resource management. An example of such a program is the Prairie Provinces Water Board Water Demand Study, completed in 1982. Water resource management issues beyond apportionment must be brought forward by the members to the Board. Hence, each Prairie Provinces Water Board member must approve each Board initiative that goes beyond apportionment responsibilities.

It is noteworthy that in Part II of the Bylaws, general objectives of the Prairie Provinces Water Board are articulated. These objectives state that the Board will promote the integrated development and use of water and water-related resources to support economic growth and to participate in the formulation and implementation of comprehensive planning or development programs according to their national, regional and provincial interest and importance. The objectives further state that the Board will provide coordination and liaison between water resource agencies and will advise governments on the planning, development, and management of inter-provincial waters.

The Master Agreement, in Schedule C, specifies the Prairie Provinces Water Board will consist of five members who shall be chosen from those engaged in the administration of water or related resources of the jurisdictions they represent: two federal government representatives, and one representative from each of the provinces. The Chairman of the Board is a federal representative, and is currently the Assistant Deputy Minister (ADM) of Environment Canada. The second federal representative is the currently the Director General of PFRA. The Provinces of Alberta, Saskatchewan, and Manitoba each have one member on the Board. Federal Board members are appointed by the Governor General in Council, provincial members are appointed by the Lieutenant Governor in Council.

Operationally, the Board is provided with a Secretariat, the chief officer of which is called the Executive Director, and who reports to the Board. As described in Article II of the By-Laws, the Secretariat is "... charged with the responsibility of conducting programs approved by the Board, collecting and analyzing data, and reporting the apportionment and water quality of interprovincial streams; for conducting approved studies, and for furthering the policies and objectives of the Board." The Secretariat of the Board is not large; the members of the Board make their staff and resources available to the Board.

The day-to-day activities of the Prairie Provinces Water Board are administered by the Executive Director of the Board and his staff. Environment Canada undertakes the monitoring program. With the approval of the Board, the Executive Director can contract out research, or other work that may have to be done. Contractors may include other government agencies such as PFRA, research institutions, or consultants.

Separate committees have been established to assist the Board in specific undertakings. There are currently three standing committees that are responsible for doing much of the work of the Prairie Provinces Water Board. These are: the Committee on Hydrology, the Committee on Water Quality, and the Committee on Groundwater.

THE COMMITTEE ON HYDROLOGY

The Committee on Hydrology, at the request of and under the direction of the Prairie Provinces Water Board, investigates, oversees, reviews, reports, and makes recommendations on matters relating to the hydrology of inter-provincial basins. The Committee may consider natural flows, streamflow forecasting, data collection and processing, natural design and any other item of a hydrological character which the Board may wish to investigate.

The Executive Director of the Prairie Provinces Water Board is the Chairman of the Committee on Hydrology. He co-ordinates the work done by the Committee. On the Committee are representatives from PFRA, Environment Canada and each of the three prairie provinces, SaskWater providing Saskatchewan's representative. Environment Canada is required to do the monitoring, which is carried out through its Water Resources Branch. When the Board requests the Committee to undertake a particular activity, this activity may be done either by agencies represented on the Committee, by the Committee itself, or by consultants. In any case, the results will likely come back to the Committee for review and approval before it is reported to the Board for follow-up action.

THE COMMITTEE ON WATER QUALITY

The Committee on Water Quality investigates, reviews, oversees, reports, and recommends on matters relating to the quality of water at inter-provincial boundaries. The Committee may, for example, assess water quality, evaluate the impact of projects on water quality at the inter-provincial boundary, establish emergency responses to spills on inter-provincial streams, and carry out other activities at the request of Board. The Committee is currently developing site specific Water Quality indicators which the Board can use to evaluate water quality at inter-provincial boundaries and identify potential inter-provincial water quality concerns.

As with the Committee on Hydrology, the Chairman of the Committee on Water Quality is the Executive Director of the Prairie Provinces Water Board and members of the Committee include representatives from Environment Canada, PFRA, and each of the three prairie provinces. Saskatchewan's member on the Committee is currently from the Water Quality Branch of Saskatchewan Environment and Public Safety.

As in the case of the Committee on Hydrology, the Board may request the Committee on Water Quality to do some thing. As appropriate, the Committee may pass the work to be done to the staff of agencies represented on the Committee, or contract the work out to an appropriate contractor.

THE COMMITTEE ON GROUNDWATER

The Terms of Reference for the Committee on Groundwater specify that the Committee investigate, oversee, review, report, and make recommendations on matters pertaining to the quantity and quality of groundwater at or near provincial boundaries, as directed by the Board. The responsibilities of the Committee include exchange of information and data, data interpretation, recommendations on groundwater information and monitoring, and determination of the implications of proposed projects on ground water at interprovincial boundaries.

As with other Board Committees, the Chairman is the Prairie Provinces Water Board's Executive Director. Members of the Committee are from PFRA, the National Hydrology Research Institute, and representatives of the three provinces. Saskatchewan's member on the Committee is currently from SaskWater.

The work of the Committee on Groundwater is done in the same manner as the work of the other two committees.

6.3 SOUTH SASKATCHEWAN RESERVOIR BOARD

The South Saskatchewan Reservoir Board was established in accordance with section 10 of the 1958 Federal-Provincial Agreement which provided for construction of the Gardiner and Qu'Appelle River Dams. Under terms of the Agreement, the South Saskatchewan Reservoir Board "shall . . . maintain effective liaison and co-ordination of maintenance and operation of the reservoir". This mandate includes the determination and implementation of policies pertaining to the operation of the dam to the extent that such policies affect the maintenance and safety of the project.

The South Saskatchewan Reservoir Board is comprised of four members: two federal members represented by PFRA and two provincial members. Saskatchewan's Board members currently represent SaskWater and SaskPower. PFRA members provide technical input related to the dam, SaskPower participation on the Board reflects its major investment in the Coteau Creek Generating Plant and its role as the major user of water, and SaskWater participation brings in the concerns of other water users. SaskWater's role also takes into account is overall responsibility for management of the province's water resources.

The Chairmanship of the Board was formerly rotated between federal and provincial representatives. The Board has recently determined that the chairmanship should reside with the Province; hence, the Chairman of the Board is filled by SaskWater's representative.

The Board normally meets at least twice a year, usually in the spring and fall. During a major flood event, however, it may meet as frequently as every day if necessary.

Because the Board co-ordinates the safety and maintenance aspects of the operations of the Gardiner Dam, the Qu'Appelle River Dam, and Lake Diefenbaker, the Board is involved, as a decision maker, in resolving matters relating to the operation of the dam and reservoir. These matters include maintenance of target elevations, response to rapid runoff, maintenance of downstream flows and similar operating concerns.

6.4 SOUTH SASKATCHEWAN RIVER BASIN STUDY BOARD

The South Saskatchewan River Basin Study Board was established in accordance with the terms of the Canada-Saskatchewan "South Saskatchewan River Basin Study Agreement" (1986). The Agreement was signed by the federal Minister of Environment and the provincial Minister responsible for SaskWater under provisions of the Canada Water Act and the Water Corporation Act.

The purpose of the South Saskatchewan Study Agreement is to:

- document current and emerging water and related issues in the South Saskatchewan River Basin in Saskatchewan;
- carry out an assessment of the water and related resources of the South Saskatchewan River Basin, and their current and future use;
- develop a framework plan for the conservation and management of the water in the South Saskatchewan River Basin in Saskatchewan which allows for the evaluation of water resource projects

The Agreement provides for the establishment of a two-person Study Board, which is comprised of one representative from Environment Canada, and one representative from SaskWater. The Board oversees the carrying out of a study program, the key elements of which are defined in Schedule A of the Agreement. The Agreement also specifies a Study Director will be hired by the Study Board. Administratively, the Study Office relies on SaskWater for services, but reports to the Board. The Study Board and Office will disappear at the end of the study and have no role in implementation.

6.5 CANADA-SASKATCHEWAN CONSULTATIVE COMMITTEE

The Canada-Saskatchewan Consultative Committee was established under the Canada Water Act as a means of facilitating information transfer and co-operation on water resource matters of common interest to both senior levels of government.

In the past, the Committee had an intergovernmental liaison role in major studies such as the Souris River Basin Study and the Qu'Appelle Basin Study. The Committee has been inactive for some time, but is likely to be re-established in the near future.

7.0 LOCAL AGENCIES

7.1 INTRODUCTION

In addition to the numerous federal and provincial agencies discussed earlier, there are a number of other agencies with direct input into the use or management of the basin. These agencies are involved in smaller scale projects relating to water use, but are a significant part of the overall administrative and legal structure of the basin.

7.2 MEEWASIN VALLEY AUTHORITY

The Meewasin Valley Authority (MVA) was established in 1979 under the Meewasin Valley Authority Act. Under the Act, it is empowered with broad rights over the river and surrounding land along the South Saskatchewan River centred on Saskatoon. It has the ability to pass bylaws, encourage certain forms of development, control development, and adopt protection or development policies. The Meewasin Valley Authority is also a developer in its own right, annually spending at least one-third of its total budget on capital works projects. This expenditure is specified in the Meewasin Valley Authority Act. These actions are decided and acted upon by the Executive Director and his staff, under the guidance of a 12 member Authority. The Authority has representation from the city of Saskatoon, the University of Saskatchewan, and the Province of Saskatchewan.

In general, Meewasin Valley Authority is a conservation agency established to protect and develop the natural, recreational and heritage resources of the area under its jurisdiction, and promote a better understanding of these resources through interpretive centres and special events. Meewasin Valley Authority developments related to valley-bottom use on publicly-owned lands in the Cranberry Flats area, and along the banks of the valley (such as the Dumont Park site development) have been authorized under the Meewasin Valley Authority Act. The Meewasin Valley Authority has the authority to develop river-use zoning programs, but has preferred to use public involvement and development plan strategies as means of resolving user conflicts. Finally, Meewasin Valley Authority approvals are necessary should any water or adjacent shoreland development project, costing more than $10 000, be proposed for the river or riverbank within the Authority's area. For example, any proposal to raise the height of the weir in the river at Saskatoon would require approval of Meewasin Valley Authority before proceeding. No Meewasin Valley Authority approvals are required for the expansion of sewer and water systems, or for the care and maintenance of facilities in place before Meewasin Valley Authority was established. Similarly, Meewasin Valley Authority has no legal authority over land uses in the Conservation Zone that existed before Meewasin Valley Authority was established. For example, the Meewasin Valley Authority has no authority over the city of Saskatoon's long-standing use of riverbank sites as snow dumps unless and until the city decides to relocate dump sites.

The planning activities of the Meewasin Valley Authority are guided by five year development plans. Meewasin Valley Authority has greatest authority within a Conservation Zone adjacent to the river. Some planning control is also exerted by the Authority outside the Conservation Zone and within the boundaries of the city of Saskatoon. In the Rural Municipality of Corman Park, Meewasin Valley Authority exercises no power beyond the Conservation Zone, a narrow strip of land adjacent to the river except for shorelands owned by Meewasin's participating parties. This is the result of the Rural Municipality of Corman Park ceasing its participation in the Meewasin Valley Authority in 1981.

As a management, decision-making, and approval agency, involved in the management of water resources of the South Saskatchewan River in and near Saskatoon, Meewasin Valley Authority has a significant interest in water quantity and quality downstream of Gardiner Dam. The agency's concerns in this area is normally expressed through the Board to the Minister responsible for SaskWater. Staff contact with SaskWater occur at the West Central Regional level.

Any projects being developed by the Meewasin Valley Authority that may significantly affect some aspect of water use, such as creation of a potential flood impact or change to the river channel, would be sent to the West Central Regional Office of SaskWater. Normally, Meewasin Valley Authority projects are too small to significantly affect Federal concerns related to fish habitat or navigable waters.

7.3 DUCKS UNLIMITED CANADA

Ducks Unlimited Canada is a private non-profit organization with the objective to increase the numbers of waterfowl by improving wetland habitat. They operate over 500 wetland projects in Saskatchewan, all of which enhance existing or provide new wetland nesting habitat.

The regional office in Regina reports to the national office in Winnipeg, and supervises a variety of Area offices and sub-offices. The area office in North Battleford, the regional office in Regina, and a sub-office in Swift Current are all involved in projects in the basin.

Along the Saskatoon Southeast Water Supply (SSEWS) system and the Qu'Appelle River, Ducks Unlimited has built a number of wetland projects for Saskatchewan Parks and Renewable Resources and left operation with the province. This occurred because Saskatchewan Parks and Renewable Resources had negotiated the purchase of water from the Saskatchewan Water Utility for wildlife in these areas, and owned the affected land, but did not have the required expertise to build the project.

Most wetlands projects proposed by Ducks Unlimited must first be approved by the Wetlands Technical Committee, headed by SaskWater. At the same time, Saskatchewan Environment and Public Safety reviews the project for environmental impact. In most cases, the project proposal is sufficiently comprehensive to allow the project to proceed after screening and without an Environmental Impact Assessment.

Once a project is approved by the Committee, Ducks Unlimited then works with the appropriate SaskWater regional office for Approval to Construct and then Approval to Operate the project. Operation approvals are normally granted for the life of the project.

7.4 CONSERVATION AND DEVELOPMENT AUTHORITIES

Conservation and Development Authorities can be established under the Conservation and Development Act when a group of farmers get together on primarily soil conservation or drainage oriented projects. In some cases, the Authorities may also deal with some irrigation or other water use concerns, such as a backflood irrigation project.

Once established, Authorities become a form of local government. As an Authority, they can access SaskWater grants for project construction, as well as technical and administrative assistance from SaskWater regional offices. They have the power to control project operations, as well as tax landowners within the Authority boundary for costs associated with the project.

The Authorities are normally run by boards elected by the membership. Most Authorities belong to the Conservation and Development Association which provides a provincial forum for dealing with common issues, and acts as a provincial lobbying body.

7.5 WATER USERS ASSOCIATIONS

Under the Water Users Act, the Minister responsible for SaskWater can approve the establishment of Water Users Associations. These Associations are local bodies which can assist a group of farmers sharing a common irrigation or water use project. The elected governing body that is established consists of a chairman, and one or more vice-chairmen or directors, depending on the size of the group.

Water Users Associations provide administrative and operational assistance to their members. The Associations have access to SaskWater grants for initial construction of facilities. They may also set schedules and fees, undertake ongoing operation and maintenance, and collect taxes related to both administration and operation expenses incurred. They can also enforce the bylaws established under the Water Users Act as well as specific bylaws established for each Association. A Saskatchewan Irrigators Association that would provide a means of dealing with common issues among the various Water Users Association is currently being established.

7.6 IRRIGATION DISTRICTS

The Irrigation Districts Act provides for the establishment of irrigation districts, but to date, none have been created under this legislation. The only existing irrigation district is Irrigation District #1, based at Outlook, which was established under separate legislation, The South Saskatchewan River Irrigation Act. The general mandate of the District is to supply water for irrigation to farmers in the District. It accomplishes this by managing the administration, operation, and maintenance associated with the major Outlook area irrigation project owned by SaskWater.

The South Saskatchewan River Irrigation District #1 is administered by a five member Board of Directors, elected by the members of the District. Reporting to the Board is a Manager, and ten administrative and technical staff. The costs for administering the District operations, as well as operation and maintenance of the irrigation system are passed on to the various members.

7.7 WATERSHED ASSOCIATIONS

A group of organizations with common watershed interests can establish a Watershed Association under the Watershed Associations Act. These Associations are normally groups of Conservation and Development Authorities, Water Users Associations, urban municipalities and rural municipalities. Watershed Associations provide means of dealing with conflicts and common interests experienced by different organizations in a given watershed. They also develop overall operation plans for water use and control systems, and determine the percentage of costs that each member will bear. There is only one Watershed Association in the basin, the Cromarty Creek Watershed Association.

7.8 CHINOOK PARKWAY

The Chinook Parkway is an area of public reserve land on either side of Swift Current Creek in the city of Swift Current. It was established by city council, with a mandate to provide some measure of environmental control and public recreation opportunities along the river. Funding for projects within the Parkway comes through a joint provincial and city agreement.

The projects and activities associated with the Parkway are administered by the Director of Recreation and Parks for the city of Swift Current. Projects and budgets are approved through City Council and the Chinook Parkway Board. The Board consists of five members, including one provincial member, currently from Saskatchewan Parks and Renewable Resources.

7.9 URBAN MUNICIPALITIES

Urban municipalities are empowered under of the Urban Municipalities Act to make by-laws in support of providing safe water supplies, water treatment, and waste treatment, based on standards set by Saskatchewan Environment and Public Safety. The powers of urban municipalities in such water management programs are subject to the Water Corporation Act and to the Provincial Environmental Management and Protection Act.

To strengthen the broad by-law powers specified in the Urban Municipalities Act, urban municipalities can employ various provisions of the Planning and Development Act. Provisions relating to control, access and land use zoning, for example, can be used to strengthen the municipality's control over its own supply or waste treatment programs.

In Saskatoon, some urban powers, typically associated with urban municipalities, have been assigned to the Meewasin Valley Authority. In Saskatoon, therefore, both the city and Meewasin Valley Authority split jurisdiction over development along the South Saskatchewan River Valley.

7.10 RURAL MUNICIPALITIES

Rural municipalities adjacent to water bodies can exert land use policies and controls which limit the types of water use activities that can occur. Under the Planning and Development Act, they can prepare and adopt planning statements, development plans, and zoning bylaws. They can also use a number of recently introduced land use management techniques, including Development Control Districts, Contract Zoning, Bonus Zoning and Holding Provisions. Assistance in developing and administering these controls is provided by Saskatchewan Rural Development.

With the proper development plans and zoning bylaws in place, a rural municipality is an important approval agent in developing water projects. Fundamentally, a rural municipality will veto a water development project if it does not meet municipal zoning bylaw provisions. The proponent can, in such cases, appeal to the Provincial Planning Appeals Board. If zoning bylaws indicate that the proposed water development project is a discretionary use, Council may refuse approval for the project. In the absence of adequate zoning bylaw provision for a proposed water development project, an amendment to the zoning bylaw is required. Such an amendment requires the approval of the Minister of Rural Development.

The municipal approval power is an important consideration in the development of water projects in the Basin. All water development projects involving more than one landowner, and requiring an Approval to Construct and an Approval to Operate from SaskWater will be reviewed by the appropriate rural municipality. This applies equally to works proposed by individuals, by associations such as Water Users Associations, or Ducks Unlimited, and by SaskWater itself. Without municipal approval, a water development project cannot proceed.

Because of the municipal approval requirement, the Rural Municipality is in a position to demand that a project proponent address concerns that may arise out of the proposal. An example, outside the basin but indicative of powers that could be exercised by rural municipalities in the basin, arises in the manner in which the Rural Municipality of Weyburn treated a proposal by the city of Weyburn to construct a new waste management facility. After being excused by the Provincial Environmental Assessment Branch from submitting an environmental impact statement on the project, the municipality demanded that a comparable document be submitted to it before further consideration would be given to the project.

Clearly, rural municipalities do have substantial power. The exercise of this power, however, is usually tempered as long as proponents follow approval processes in place.

7.11 BUFFALO POUND WATER ADMINISTRATION BOARD

The Buffalo Pound Water Administration Board administers water supply and treatment systems at Buffalo Pound Lake for the cities of Regina and Moose Jaw. The Board is comprised of three members from the cities of Moose Jaw and Regina. Chairmanship of the Board alternates annually.

As part of its role in providing water, the Board is concerned with outflows from Lake Diefenbaker into the Qu'Appelle River. The Buffalo Pound Water Administration Board may submit its concerns, requests, and recommendations to SaskWater either directly or via the Operations Committee.

APPENDIX A

SOUTH SASKATCHEWAN RIVER BASIN STUDY
LIST OF TECHNCIAL REPORTS

SOUTH SASKATCHEWAN RIVER BASIN STUDY
TECHNICAL REPORTS

TITLE	SSRB TECHNICAL REPORT	DATE
Annual Report to December 31, 1986	A.3	11.87
Annual Report to December 31, 1987	A.4	07.88
Annual Report to December 31, 1988	A.5	05.89
Annual Report to December 31, 1989	A.6	03.90
Compendium of Water Quality Objectives Development Methodologies	D.9	06.88
Contaminant Organic Compounds in the Surface Waters of the South Saskatchewan River Basin	D.4	12.87
Crop Damage and Associated Economic Impact of Flooding, South Saskatchewan River Downstream of Lake Diefenbaker	E.13	12.89
Data Collection and Date Base Development: South Saskatchewan River Basin Recreation Survey	E.1	11.86
The Delphi Report	B.3	08.90
Demand for Water-Based Recreation in the South Saskatchewan River Basin	E.17	08.90
Economic Profile and Trends 1951-1986	E.9	06.88
Erosion and Sedimentation in the South Saskatchewan River Basin	C.9	12.89
Farm-Level Drought Analysis Model	E.15	08.90
Fishery Survey of the South Saskatchewan River and Its Tributaries in Saskatchewan	D.8	11.88
Flood Frequencies in the South Saskatchewan River Basin	C.5	08.88
Flooding Gardiner Dam to the Forks	C.8	10.89
Framework Plan Working Definition	B.1	09.87
Frequency Analysis of Meterological Drought in the Saskatchewan Portion of the South Saskatchewan River Basin	C.4	07.88
Ground Water and the South Saskatchewan River Basin: Recommendations to the Study Board	C.2	03.88
Ground Water Study: South Saskatchewan River Basin	C.2	03.88
Heritage Resources	E.16	08.90
A Hydraulic Study of the South Saskatchewan River	E.12	05.89
Hydro System Simulation (HYDSIM) Model Study Report	C.7	05.89
Hydrologic Drought Analysis of Simulated Flows - South Saskatchewan River Basin	C.6	02.89
Information Base: Surface Water Hydrology and Water Use	E.2	03.87
Instream Water Use: South Saskatchewan River Basin	E.7	12.87
Irrigation Water Use Pilot Study	E.8	04.88
Irrigation Water Use Survey (South Saskatchewan River Basin Study)	E.11	12.88
Lake Diefenbaker Trophic State Model	D.5	01.88
Land Use in the Effective Drainage Area of the South Saskatchewan River Basin	D.2	10.87

SOUTH SASKATCHEWAN RIVER BASIN STUDY
TECHNICAL REPORTS

TITLE	SSRB TECHNICAL REPORT	DATE
Legal and Administrative Analysis Interim Report	B.2	03.88
Legal and Administrative Summary	B.4	02.91
Low Flow Frequency Analysis for the South Saskatchewan River	C.10	05.91
Major Industrial Water Users in the South Saskatchewan River Basin	E.10	10.88
Mass Loading of Phosphorus to Lake Diefenbaker	D.13	09.89
Municipal and Residential Water Use Study	E.5	08.87
Municipal Water Use Survey	E.3	07.87
Nutrient Quality Review and Objectives Development for the South Saskatchewan River Basin	D.14	01.90
Phosphorus Loading from Non-Point Sources Relevant to the Lake Diefenbaker Basin	D.1	09.87
Proposed Water Quality Objectives for the South Saskatchewan River Basin	D.12	08.89
Public Involvement Program Position Paper	F.1	10.86
Public Opinion Survey, 1988 Survey Design	F.2	03.88
Recreational Data Analysis Report South Saskatchewan River Basin	E.4	07.87
Reservoir Salinity Model: Application to the Saskatoon Southeast Water Supply System	D.16	05.90
Reservoir Salinity Study Phase 1	D.7	10.88
Short-term Water Use Forecast South Saskatchewan River Basin Study	E.14	12.89
Study Plan and Annual Work Plans - 1987	A.2	02.87
Study Proposal for the South Saskatchewan River Basin	A.1	04.86
Style Guides for Reports	A.7	03.90
Summary and Evaluation of the Public Information and Awareness Strategy	F.3	09.89
Summary and Evaluation of the Public Information and Awareness Strategy, April 1990	F.4	04.90
Summary and Evaluation of the Public Information and Awareness Strategy, November 1990	F.5	12.90
Water Demand Management: An Application to the South Saskatchewan River Basin	E.18	08.90
Water Intake and Outfall Survey South Saskatchewan River Basin	E.6	12.87
Water Management Model Study South Saskatchewan River Basin	C.1	01.88
Water Quality Data Review	D.6	03.88
Water Quality Modelling South Saskatchewan River	D.10	04.89
Water Quality Monitoring Plan for the South Saskatchewan River Basin	D.15	04.90
Water Quality Monitoring Review South Saskatchewan River Basin	D.11	06.89
Water Quality Trend Analysis and Data Base Summary	D.3	11.87
Water Use Analysis Model Study: South Saskatchewan River Basin Study	D.19	05.91

APPENDIX B

MASTER AGREEMENT ON APPORTIONMENT

MASTER AGREEMENT ON APPORTIONMENT

THIS AGREEMENT is made in quadruplicate this THIRTIETH day of OCTOBER, 1969, A.D.

BETWEEN:

HER Majesty, the Queen, in right of Canada, represented herein by the Minister of Energy, Mines and Resources

(Hereinafter called "Canada")

- and -

HER Majesty, the Queen, in right of Alberta, represented herein by the Minister in charge of Water Resources for Alberta

(Hereinafter called "Alberta")

- and -

HER Majesty, the Queen, in right of Saskatchewan, represented herein by the Minister in charge of The Water Resources Commission Act of the said Province

(Hereinafter called "Saskatchewan")

- and -

HER Majesty, the Queen, in right of Manitoba, represented herein by the Minister in charge of The Water Control and Conservation Branch Act of the said Province

(Hereinafter called "Manitoba")

WHEREAS under natural conditions the waters of the watercourses hereinafter referred to arising in or flowing through the Province of Alberta would flow into the Province of Saskatchewan and under the said conditions the waters of some of the said watercourses arising in or flowing through the Province of Saskatchewan would flow into the Province of Manitoba;

AND WHEREAS the Governor-in-Council has authorized Canada to enter into this agreement by Order-in-Council P.C. 1969-8/2051 dated October 29, 1969, and the Lieutenant Governors-in-Council for Alberta, Manitoba and Saskatchewan, respectively, have authorized them to enter into this agreement by the following Orders-in-Council:

Alberta	- O.C. 2053-69
Manitoba	- O.C. 1359/69
Saskatchewan	- O.C. 1612/69

AND WHEREAS the parties hereto deem it to be in their mutual interest that an agreement be reached among the four parties as to the apportionment as described in the schedules attached hereto of such interprovincial waters among the three Provinces;

AND WHEREAS Alberta and Saskatchewan have entered into an agreement, which agreement is attached to this agreement as Schedule A, that permits the Province of Alberta to make a net depletion of one-half the natural flow of water arising in or flowing through the Province of Alberta and that permits the remaining one-half of the natural flow of each such watercourse to flow into the Province of Saskatchewan, subject to certain exceptions as are set forth in the said agreement;

AND WHEREAS Saskatchewan and Manitoba have entered into an agreement which agreement is attached to this agreement as Schedule B, that permits the Province of Saskatchewan to make a net depletion of one-half the natural flow of water arising in, and one-half of the water flowing into the Province of Saskatchewan, and that permits the remaining one-half of the flow of each such watercourse to flow into the Province of Manitoba, subject to such conditions and agreements as therein contained;

AND WHEREAS the parties are desirous that the Prairie Provinces Water Board (referred to herein as the Board), reconstituted by this agreement will be responsible for the administration of this agreement;

AND WHEREAS the parties hereto recognize the continuing need for consultation and co-operation as between themselves with respect to the matters herein referred to so that the interests of all the parties are best served;

NOW THEREFORE, THIS AGREEMENT (hereinafter known as the Master Agreement) witnesseth that each party agrees as follows:

Interprovincial Agreements

1. Alberta and Saskatchewan agree that the agreement between them (hereinafter called the First Agreement), a copy of which is set out in Schedule A to the Master Agreement, will become binding upon them upon the date that the Master Agreement is executed.

2. Saskatchewan and Manitoba agree that the agreement between them (Hereinafter called the Second Agreement), a copy of which is set out in Schedule B to the Master Agreement, will become binding upon them upon the data that the Master Agreement is executed.

3. The parties agree to the apportionment of water between Alberta and Saskatchewan and Manitoba as provided in the First and Second Agreements and each party agrees to be bound by the said agreements as they relate to apportionment as if it were a party thereto.

4. The parties agree that the First or Second Agreement, or both, may be altered by an agreement in writing among the four parties to the Master Agreement, but not otherwise.

5. The parties agree that the First and Second Agreements will continue in force and effect until cancelled by an agreement in writing among the four parties to the Master Agreement.

Water Quality

6. The parties mutually agree to consider water quality problems; to refer such problems to the Board; and to consider recommendations of the Board thereon.

Monitoring

7. The parties agree that the monitoring of the quantity and quality of waters as specified in the First and Second Agreements, the collection, compilation and publication of water quantity and quality data required for the implementation and maintenance of the provisions of this agreement shall be conducted by Canada, subject to provision of funds being voted by the Parliament of Canada.

Administration

8. The parties agree, subject to Clause 9 of this agreement that it at any time, any dispute, difference or question arises between the parties with respect to this agreement or the construction, meaning and effect thereof, or anything therein, or the rights and liabilities of the parties thereunder or otherwise in respect thereto, then every such dispute, difference or question will be referred for determination to the Exchequer Court under the provisions of the Exchequer Court Act of Canada and each of the parties hereto agrees to maintain or enact the necessary legislation to provide the Exchequer Court with jurisdiction to determine any such dispute, difference, or question in the manner provided under the Exchequer Court Act.

9. The parties also agree that the Board, with the consent of the parties in dispute, may cause to be prepared, a factual report of the dispute for consideration by the parties hereto prior to the referral of the dispute to the Exchequer Court.

10. The parties agree that the Prairie Provinces Water Board shall monitor and report on the apportionment of waters as set out in the provisions of the First and Second Agreements and ratified by this Master Agreement.

11. The parties agree to revoke the agreement data July 28, 1948, establishing the Prairie Provinces Water Board and to reconstitute the Prairie Provinces Water Board in the form of Schedule C hereto and the said Schedule shall form and become part of this Master Agreement.

12. Because the Orders-in-Council referred to in Schedule D hereto will become redundant upon the execution of this Master Agreement, the parties agree to take steps to have them revoked.

13. The parties agree for the future application of the provisions of the Master Agreement (and the First and Second Agreements thereunder), to work together and to cooperate to the fullest extent each with the other for the integrated development and use of water and related resources to support economic growth according to selected social goals and priorities and to participate in the formulation and implementation of comprehensive planning and development programs according to their national, regional and provincial interest and importance.

14. No Member of the Parliament of Canada or Member of the Legislative Assemblies of the Provinces party to this agreement shall hold, enjoy, or be admitted to any share or part of any contract, agreement, commission or benefit arising out of this agreement.

IN WITNESS HEREOF Canada has caused its presents to be executed by its Minister of Energy, Mines and Resources, and Alberta has caused its presents to be executed by its Minister in charge of Water Resources, and Saskatchewan has caused its presents to be executed by its Minister in charge of The Water Resources Commission Act, and Manitoba has caused its presents to be executed by its Minister in charge of The Water Control and Conservation Branch Act of the day and year first mentioned above.

"A. Davidson"
Witness to the signature of the Minister
(Energy, Mines and Resources) for Canada

"J.J. Greene"
Minister (Energy, Mines and Resources) for Canada

October 30, 1969
Date

"R.E. Bailey"
Witness to the signature of the Minister in
charge of Water Resources for Alberta

"Henry A. Ruste"
Minister in charge of Water Resources for
Alberta

October 30, 1969
Date

"Harold W. Pope"
Witness to the signature of the Minister
in charge of The Water Resources Commission
Act for Saskatchewan

"Allan R. Guy"
Minister in charge of The Water Resources
Commission Act for Saskatchewan

October 30, 1969
Date

"Thomas E. Weber"
Witness to the signature of the Minister in
charge of The Water Control and Conservation Branch Act
for Manitoba

"Leonard S. Evans"
Minister in charge of The Water Control
and Conservation Branch Act for Manitoba

October 30, 1969
Date

4th Recital Clause amended on July 5, 1984

SCHEDULE A

THIS AGREEMENT is made in quadruplicate this THIRTIETH day of OCTOBER, 1969, A.D.

BETWEEN:

HER Majesty, the Queen, in right of Alberta, represented herein by the Minister in charge of Water Resources for Alberta

(Hereinafter called "Alberta")

- and -

HER Majesty, the Queen, in right of Saskatchewan, represented herein by the Minister in charge of The Water Resources Commission Act of the said Province

(Hereinafter called "Saskatchewan")

WHEREAS under natural conditions the waters of the watercourses hereinafter referred to arising in or flowing through the Province of Alberta would flow into the Province of Saskatchewan and under the said conditions the waters of some of the said watercourses arising in or flowing through the Province of Saskatchewan would flow into the Province of Manitoba;

AND WHEREAS the parties hereto deem it to be in their mutual interest and in the interest of Manitoba that an agreement in principle be reached among the said three Provinces as to the apportionment of such interprovincial waters among them;

AND WHEREAS the parties hereto are of the opinion that an equitable apportionment of such waters as between the adjoining Provinces of Alberta and Saskatchewan would be to permit the Province of Alberta to make a net depletion of one-half the natural flow of water arising in or flowing through the Province of Alberta and to permit the remaining one-half of the natural flow of water of each such watercourse to flow into the Province of Saskatchewan, subject to certain prior rights as are hereinafter set forth or may hereafter be mutually agreed upon in writing;

AND WHEREAS on the basis of the foregoing apportionment as between the Provinces of Alberta and Saskatchewan the parties hereto are of the opinion that in a similar manner, an equitable apportionment of the remainder of the natural flow of the said watercourses that flow into the Province of Manitoba after permitting the Province of Alberta to make its depletion of one-half thereof would be to permit the Province of Saskatchewan to make a net depletion of one-half of the said remainder and to permit the other one-half thereof to flow into the Province of Manitoba; and that the natural flow of any tributaries to the said watercourses which tributaries join the said watercourses in the Province of Saskatchewan without arising in or first flowing through the Province of Alberta could be apportioned one-half to the Province of Saskatchewan and one-half to the Province of Manitoba in a manner similar to the apportionment of waters as between the Provinces of Alberta and Saskatchewan, in all cases subject to such prior rights as may be mutually acknowledged by the said Provinces of Manitoba and Saskatchewan;

AND WHEREAS the parties hereto recognize the continuing need for consultation and cooperation as between themselves and with Manitoba with respect to the matters herein referred to so that the best and most beneficial use of the said waters may be made and the interests of all said provinces best served:

NOW THIS AGREEMENT witnesseth as follows:

1. IN THIS AGREEMENT:

   (a) "Natural flow" means the quantity of water which would naturally flow in any watercourse had the flow not been affected by human interference or human intervention, excluding any water which is part of the natural flow in Alberta but is not available for the use of Alberta because of the provisions of any international treaty which is binding on Alberta.

   (b) "Watercourse" means any river, stream, creek, or other natural channel which from time to time carries a flowing body of water from the Province of Alberta to the Province of Saskatchewan and includes all tributaries of each such river, stream, creek or natural channel which do not themselves cross the common boundary between the Provinces of Alberta and Saskatchewan. Such tributaries as do themselves cross the said common boundary between the Provinces of Alberta and Saskatchewan shall be deemed to be "watercourses" for the purpose of this agreement.

2. (a) The parties hereto shall mutually establish a method by which to determine the natural flow of each watercourse flowing across their said common boundary.

   (b) For the purpose of this agreement, the said natural flow shall be determined at a point as near as reasonably may be to their said common boundary.

   (c) Notwithstanding sub-paragraph (b) the point of which the natural flow of the watercourses known as the South Saskatchewan and Red Deer Rivers is to be determined may be, at the option of Alberta, a point at or as near as reasonably may be below the confluence of the said two rivers.

3. Alberta shall permit a quantity of water equal to one-half the natural flow of each watercourse to flow into the Province of Saskatchewan, and the actual flow shall be adjusted from time to time on an equitable basis during each calendar year, but this shall not restrict or prohibit Albert from diverting or consuming any quantity of water from any watercourse provided that Alberta diverts water to which it is entitled of comparable quality from other streams or rivers into such watercourse to meet its commitments to Saskatchewan with respect to each watercourse.

4. Notwithstanding paragraph 3 hereof, the following special provisions shall apply as between the parties hereto with respect to the watercourse known as the South Saskatchewan River.

   (a) Alberta shall be entitled in each year to consume, or to divert or store for its consumptive use a minimum of 2 100 000 acre-feet net depletion out of the flow of the watercourse known as the South Saskatchewan River even though its share for the said year, as calculated under paragraph 3 hereof, would be less than 2 100 000 acre-feet net depletion, provided however Alberta shall not be entitled to so consume or divert, or store for its consumptive use, more than one-half the natural flow of the said South Saskatchewan watercourse if the effect thereof at any time would be to reduce the actual flow of the said watercourse at the common boundary of the said Provinces of Saskatchewan and Alberta to less than 1,500 cubic feet per second.

   (b) The consumption or diversion by Alberta provided for under the preceding sub-paragraph shall be made equitably during each year, depending on the actual flow of water in the said watercourse and the requirements of each Province, from time to time.

5. The parties hereto shall work together and co-operate to the fullest extent, each with the other, for the most effective, economical and beneficial use of waters flowing from the Province of Alberta into the Province of Saskatchewan, including the construction and operation of approved projects of mutual advantage to our Provinces on a cost-share basis proportionate to the benefits derived therefrom by each Province, (the approval of which projects shall not be unreasonably withheld by either of the parties hereto) and shall enter into such other arrangements, agreements or accords with each other, and with the Governments of Canada and other Provinces to best achieve the principles herein agreed upon.

6. Notwithstanding paragraph 3 hereof, with respect to each of the three watercourses known as Battle Creek, Lodge Creek, and Middle Creek, the annual flow shall be apportioned such that, in each of the said watercourses, Alberta permits a quantity of water equal to 75 percent of the natural flow to pass the interprovincial boundary from Alberta to Saskatchewan.

7. If at any time any dispute, difference or question shall arise between the parties or their representatives touching this agreement or the construction, meaning and effect thereof, or anything therein, or the rights or liabilities, of the parties or their representatives thereunder or otherwise in respect thereto then every such dispute, difference or question shall be referred for determination to the Exchequer Court under the provisions of The Exchequer Court Act of Canada, and each of the parties hereto agrees to enact the necessary legislation to provide the Exchequer Court with jurisdiction to determine any such dispute, difference or question in the manner provided under Section 30 of The Exchequer Court Act.

8. This agreement shall become effective upon the execution of an agreement by Canada, Alberta, Manitoba and Saskatchewan relative to the apportionment of waters referred to in this agreement.

IN WITNESS WHEREOF Alberta has caused these presents to be executed on its behalf by its Minister in charge of Water Resources, and Saskatchewan has caused these presents to be executed by its Minister in charge of The Water Resources Commission Act, both on the day and year first above mentioned.

"R.E. Bailey"

Witness to the signature of the Minister
in charge of Water Resources for Alberta

"Henry A. Ruste"

Minister in charge of Water Resources for Alberta

"Harold W. Pope"

Witness to the signature of the Minister
in charge of The Water Resources Commission Act

"Allan R. Guy"

Minister in charge of The Water Resources Commission Act

Section 6 amended on July 5, 1984.

SCHEDULE B

THIS AGREEMENT is made in quadruplicate this THIRTIETH day of October, 1969, A.D.

BETWEEN:

HER Majesty, the Queen, in right of Saskatchewan, represented herein by the Minister in charge of The Water Resources Commission Act of the said Province

(Hereinafter called "Saskatchewan)

- and -

HER Majesty, the Queen, in right of Manitoba, represented herein by the Minister in charge of The Water Control and Conservation Branch Act of the said Province

(Hereinafter called "Manitoba")

WHEREAS under natural conditions the waters of the watercourses hereinafter referred to arising in or flowing through the Province of Saskatchewan would flow into the Province of Manitoba;

AND WHEREAS the parties hereto deem it to be in their mutual interest and in the interest of Alberta that an agreement in principle be reached among the said three Provinces as to the apportionment of interprovincial waters among them;

AND WHEREAS the parties hereto are of the opinion that an equitable apportionment of such waters as between the adjoining Provinces of Saskatchewan and Manitoba would be to permit the Province of Saskatchewan to make a net depletion of one-half the natural flow of water arising in, and one-half the flow of water flowing into, the Province of Saskatchewan, and to permit the remaining one-half of the flow of water of each such watercourse to flow into the Province of Manitoba, subject to certain rights as may hereafter be mutually agreed upon in writing;

AND WHEREAS on the basis of the forgoing apportionment as between the Provinces of Saskatchewan and Manitoba, the parties hereto are of the opinion that in a similar manner, an equitable apportionment of the natural flow of the said watercourses arising in or flowing through the Province of Alberta would be to permit the Province of Alberta to make a net depletion of one-half thereof, subject to such prior rights as may be mutually acknowledged by the said Provinces of Alberta, Saskatchewan and Manitoba;

AND WHEREAS the parties hereto recognize the continuing need for consultation and co-operation as between themselves and with Alberta with respect to the matters herein referred to so that the interests of all said Provinces are best served;

NOW THIS AGREEMENT witnesseth as follows:

1. IN THIS AGREEMENT:

   (a) "Natural flow' means the quantity of water which would naturally flow in any watercourse had the flow not been affected by human interference or human intervention.

   (b) "Watercourse" means any river, stream, creek, o r other natural channel which from time to time carries a flowing body of water from the Province of Saskatchewan to the Province of Manitoba and includes all tributaries of each such river, stream, creek or natural channel which do not themselves cross the common boundary between the Provinces of Saskatchewan and Manitoba. Such tributaries as do themselves cross the said common boundary between the Provinces of Saskatchewan and Manitoba shall be deemed to be "watercourses" for the purpose of this agreement.

2. (a) The parties hereto shall mutually establish a method by which to determine the natural flow of each watercourse flowing across their said common boundary.

   (b) For the purpose of this agreement, the said natural flow shall be determined at a point as near as reasonably may be to their said common boundary.

3. Saskatchewan shall permit in each watercourse the following quantity of water to flow into Manitoba during the period from April 1 of each year to march 31 of the year following: A quantity of water equal to the natural flow for that period determined at the point referred to in paragraph 2(b) hereof, less

(a) one-half the water flowing into Saskatchewan in that watercourse from Alberta, and

(b) any water which would form part of the natural flow in that watercourse but does not flow into Saskatchewan because of the implementation of any provision of any subsisting water apportionment agreement made between Alberta and Saskatchewan and approved by Manitoba, and

(c) one-half the natural flow arising in Saskatchewan.

The actual flow shall be adjusted from time to time by mutual agreement on an equitable basis during such period but this shall not restrict or prohibit Saskatchewan from diverting, storing or consuming any quantity of water from any watercourse provided that Saskatchewan diverts water to which it is entitled of comparable quality from other streams or rivers into such watercourse to meet its commitments to Manitoba with respect to each watercourse.

4. Saskatchewan shall be entitled during such period to consume or to divert or store for its consumptive use the water it is not required to permit to flow into Manitoba in each watercourse under paragraph 3 hereof, but such consumption or diversion shall be made equitably depending on the actual flow of water in each watercourse and the requirements of each Province from time to time, but Saskatchewan shall permit sufficient water to flow into Manitoba to meet its commitments during such period under paragraph 3 hereof.

5. The parties hereto shall work together and co-operate to the fullest extent, each with the other, for the use of waters flowing from the Province of Saskatchewan into the Province of Manitoba, including the construction and operation of approved projects of mutual advantage to the said Provinces on a cost-share basis proportionate to the benefits derived therefrom by each Province (the approval of which projects shall not be unreasonably withheld by either of the parties hereto) and shall enter into such other arrangements, agreements or accords with each other, and with the Governments of Canada and other Provinces to best achieve the principles herein agreed upon.

6. If at any time any dispute, difference or question shall arise between the parties or their representatives touching this agreement or the construction, meaning and effect thereof, or anything therein, or the rights or liabilities of the parties or their representatives thereunder or otherwise in respect thereto then every such dispute, difference or question shall be referred for determination to the Exchequer Court under the provisions of The Exchequer Court Act of Canada, and each of the parties hereto agrees to maintain or enact the necessary legislation to provide the Exchequer Court with jurisdiction to determine any such dispute, difference or question in the manner provided under The Exchequer Court Act.

7. This agreement shall become effective upon the execution of an agreement by Canada, Alberta, Manitoba and Saskatchewan relative to the apportionment of waters referred to in this agreement.

IN WITNESS WHEREOF Saskatchewan has caused these presents to be executed by its Minister in charge of The Water Resources Commission Act, and Manitoba has caused these presents to be executed by its Minister in charge of The Water Control and Conservation Branch Act on the day and year first above mentioned.

"Harold W. Pope"
Witness to the signature of the Minister
in charge of The Water Resources Commission Act

"Allan R. Guy"
Minister in charge of The Water Resources Commission Act

"Thomas E. Weber"
Witness to the signature of the Minister
in charge of The Water Control and Conservation Branch Act

"Leonard S. Evans"
Minister in charge of The Water Control and Conservation Branch Act.

SCHEDULE C

PRAIRIE PROVINCES WATER BOARD AGREEMENT

THIS AGREEMENT made this THIRTIETH day of OCTOBER, 1969, A.D.

BETWEEN:

THE GOVERNMENT OF CANADA, hereinafter called "Canada"

- and -

THE GOVERNMENT OF MANITOBA, hereinafter called "Manitoba"

- and -

THE GOVERNMENT OF SASKATCHEWAN, hereinafter called "Saskatchewan"

- and -

THE GOVERNMENT OF ALBERTA, hereinafter called "Alberta"

1. Manitoba, Saskatchewan, Alberta and Canada agree to establish and there is hereby established a Board to be known as the Prairie Provinces Water Board to consist of five members to be appointed as follows:

   (a) two members to be appointed by the Governor General in Council, one of whom shall be Chairman of the Board, on the recommendation of the Minister of Energy, Mines and Resources,

   (b) one member to be appointed by the Lieutenant Governor in Council of each of the Provinces of Manitoba, Saskatchewan and Alberta.

2. Functions

The Board shall oversee and report on the Master Agreement (including the First and Second Agreements thereunder) executed by Canada, Alberta, Manitoba and Saskatchewan for the apportionment of waters flowing from one Province into another province; shall take under consideration, comprehensive planning, water quality management and other questions pertaining to water resource management referred to it by the parties hereto; shall recommend appropriate action to investigate such matters and shall submit recommendations for their resolution to the parties hereto.

3. Composition of Board

The members of the Board shall be chosen from those engaged in the administration of water resources or related duties for Manitoba, Saskatchewan, Alberta or Canada, as the case may be, and shall serve as members of the Board in addition to their other duties.

4. Duties of the Board

In accordance with its functions, the duties of the Board shall be as follows:

(a) to review, collate, and analyze streamflow data and prepare reports and recommendations on the apportionment of water,

(b) to review water quality problems, particularly such problems located at the interprovincial boundaries, and to recommend to the parties hereto, appropriate management approaches for their resolution including the establishment of new institutional arrangements,

(c) to develop recommendations on other water matters, in addition to problems on water quality, referred to the Board by any party hereto including the review and analysis of existing information and the requesting of additional studies and assistance by appropriate governmental agencies to provide information for formulating its recommendations,

(d) to promote through consultation and the exchange of information the integrated development of water resources of interprovincial streams,

(e) to cause to be prepared with the consent of the parties involved factual reports on disputes arising out of the water apportionment for consideration by the parties hereto,

(f) to ensure the co-ordination of such technical programs as water quantity and quality monitoring and streamflow forecasting required for the effective apportionment of water.

5. Confirmation of the Board's Recommendations

A recommendation of the Board with respect to any matters referred to it under Section 2 shall, subject to the Master Agreement for the apportionment of water, become effective when adopted by Orders-in-Council passed by Canada and each of the Provinces.

6. Authority of Board

The Board shall have authority to correspond with all Governmental organizations and other sources of information in Canada or abroad concerned with the administration of water resources, and such other authority as may be conferred on the Board rom time to time by agreement between the parties hereto; all agencies of the four governments having to do with the water and associated resources in the area covered by the Agreement shall be required to supply the Board with all data in their possession requested by the Board.

7. Records

The records relating to the water resources of the three provinces collected and compiled by the P.F.R.A. organization at Regina shall be made available to the Board.

8. Meetings of the Board

The Board shall meet at the call of the Chairman and meetings shall be called at least twice annually; the expenses of the members shall be borne by their respective governments.

9. Reports

The Board shall submit an annual progress report outlining work done and work contemplated in the agreed program to each of the responsible Ministers of the parties hereto and such other reports as may be requested by any one of such Ministers.

10. Operation of the Board

The Secretary for the Board and such other technical and clerical staff as may be required, with a headquarters at Regina, shall be Federal or Provincial public servants. The cost of administration, excluding the cost of monitoring as described in Section 7 of the Master Agreement, but including staff, accommodation, supplies and incidental expenses of the Board, shall be borne by the parties hereto on the basis of one-half by Canada and one-sixth by each of the Provinces. The Board shall prepare for approval of the parties hereto, work program, staff requirements, annual budgets and five-year forecasts and such other reports as may be required in the operation of the Board.

11. Any water development project already constructed or to be constructed by any one of the parties shall be so operated as to maintain the apportionment of water as set out in the Master Agreement (and the First and Second Agreements thereunder) for the apportionment of waters of interprovincial streams.

SCHEDULE D

PREVIOUS ALLOCATIONS OF INTERPROVINCIAL WATERS APPROVED BY ORDERS-IN-COUNCIL BY THE GOVERNMENTS OF CANADA, ALBERTA, MANITOBA, AND SASKATCHEWAN

	Order-in-Council			
Item	Canada	Alberta	Saskatchewan	Manitoba
Allocation of water for specific projects in Alberta	4030/49	857/49	1307/51	1121/49
Allocation of water for specific projects in Saskatchewan	1874/51	1091/51	1310/51	1264/51
Allocation of water for South Saskatchewan River Project in Saskatchewan	973/53	991/53	1271/53	924/53

APPENDIX C
WATER MANAGEMENT AGENCIES AND LEGISLATION

AGENCIES AND PRINCIPLE LEGISLATION	
FEDERAL AGENCIES AND LEGISLATION	
Environment Canada	Government Organization Act Canada Water Act Canadian Environmental Protection Act Fisheries Act Migratory Birds Convention Act Canada Wildlife Act National Parks Act
Fisheries and Oceans Canada	Fisheries Act
Prairie Farm Rehabiliation Administration (PFRA)	Prairie Farm Rehabilitation Act
PROVINCIAL AGENCIES AND LEGISLATION	
Sask Water	Water Corporation Act Conservation and Development Act Environmental Management and Protection Act Watershed Association Act Water Users Act Irrigation Districts Act South Saskatchewan River Irrigation Act Groundwater Conservation Act Water Power Act
Saskatchewan Environment and Public Safety	Environmental Management and Protection Act Environmental Assessment Act
Saskatchewan Parks and Renewable Resources	Parks Act Fisheries Act
Saskatchewan Rural Development	Planning and Development Act
LOCAL AGENCIES AND LEGISLATION	
Meesawin Valley Authority	Meewasin Valley Authority Act
Conservation and Development Authorities	Conservation and Development Act
Water Users Associations	Water Users Act
Irrigation Districts	Irrigation Districts Act The South Saskatchewan River Irrigation Act
Watershed Associations	Watershed Associations Act
Urban Municipalities	Urban Municipalities Act Water Corporation Act Environmental Management and Protection Act Planning and Development Act
Rural Municipalities	Planning and Development Act